HOSPITAL ABSTRACTS

A MONTHLY SURVEY OF WORLD LITERATURE

PREPARED BY THE DEPARTMENT OF HEALTH AND SOCIAL SECURITY

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HOSPITAL ABSTRACTS

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HOSPITALS IN GENERAL

See Abstract No. 174

HOSPITALS IN OTHER COUNTRIES

See also Abstract Nos. 151, 211

150. DANIELSEN, E. Trekk ved utviklingsarbeidet i det norske helse og sykehusvesen. **[Features of development in the Norwegian health and hospital services.]** *Norsk Sykehustidende*, Oslo, 1975, Oct., vol. 48, no. 10, pp. 189-201.

The cost of manpower requirements of the Norwegian health service have risen sharply in recent years, placing greater demands on administration. Improvements required involve division of labour, co-ordination of fields of responsibility, and staff motivation. The use of computers in information storage and processing is increasing in three areas: (i) medical treatment; (ii) patient administration; and (iii) administration of resources. A series of research projects has been planned, of which the following are under way: (i) economic medical information projects, to investigate requirements for patient-administrative information; (ii) a register of health institutions; (iii) a health staff register; (iv) a county health planning investigation; (v) an infectious diseases register; (vi) SYSVAK, a vaccination register; (vii) a births register; and (viii) a laboratory functions study. The Norwegian Parliament passed legislation in the autumn of 1975 governing the use of computers in the health system. Criteria for the assessment of rationalization must make it possible to compare wards within a hospital, compare hospitals, quantify problems in hospitals of different sizes, and reveal bottle-necks. Rationalization therefore involves the selection of criteria, analysis of need, statement of problems, and the planning and implementation of solutions in the correct order of priority. The Norwegian Institute for Hospital Research (NIS) is currently occupied with three main areas of research: (i) systems analysis; (ii) organization of work, social structure and processes; and (iii) institutional planning.

PLANNING, DESIGN AND CONSTRUCTION

See also Abstract No. 273

151. ROSOFF, A. J. **Health planning and certification of need under the new federal health planning act.** *Hospital Administration*, Chicago, 1975, vol. 20, no. 3, pp. 60-72.

The National Health Planning and Resources Development Act of 1974 is seen as a major experiment in the organization and regulation of American health care. It attempts to establish a rational basis upon which new health resources can be founded, consolidating overlapping schemes and organizational structures. Some of the major

policy issues within the Act are discussed, with reference to the certificate of need process. In conclusion, the author believes that the progress of this Act will be watched with great interest by all in the health care field and particularly by those in a position to influence state action.

152. WEST, J. P. **Health planning in multifunctional regional councils: Baltimore and Houston experience.** *Inquiry*, Chicago, 1975, Sept., vol. 12, no. 3, pp. 180-192.

A review of the activities of the multifunctional regional councils in area-wide comprehensive health planning in Baltimore and Houston is discussed, with reference to the other councils of government for health. Analysis of the organization brings into question the advantages of using multifunctional councils to plan comprehensive health services. Although the public interest may be best represented by these councils it is also true that local political pressures may become of increasing importance. The United States government recently passed legislation to provide some form of public accountability in the area of health care planning and development whilst seeking to minimize the likelihood of unwarranted political interference with the decision making processes.

153. Les équipements publics hospitaliers: choix et financement. **[Equipping public hospitals: selection and cost.]** *Gestions Hospitalières*, Mantes, 1975, Oct., no. 149, pp. 705-710.

This paper written by students at the French National School of Administration, forms part of a general study of rationalization and financing of investment in the public sector. It describes the present methods of planning—the use of the ratio of beds per 1,000 population, the five-year plans, and the health map. These methods are to some extent empirical since the value of health to society in general cannot be quantified. Nonetheless, some rationalization is possible, and the authors discuss the use of cost-benefit analysis and operational models. They emphasize the value of preliminary, systematic evaluation of operating costs.

BUILDING: TENDERING, ETC.

154. LAVERRIERE and others. La réforme de l'ingénierie et son application dans le domaine hospitalière. **[The reform of engineering and its application in the hospital field.]** *Revue Hospitalière de France*, Paris, 1975, Aug./Sept., vol. 39, no. 283, pp. 583-667.

The objectives of the reforms in engineering are to secure the best return on investment, to improve the processes of construction by paying greater attention to preliminary planning, to improve the quality of the relevant documents by defining what each should contain, and to improve estimates of construction costs while recognizing that these will always include an element of uncertainty. For example the fee paid to the designer will be a percentage of the total contract price and will vary with the complexity of the work undertaken. A fine can be imposed if the actual cost exceeds the estimated cost by more than a fixed percentage. In the public sector the prime contractor must in future be a public sector employee but he may delegate his authority to a specialist, i.e. an architect or an engineer. Most of this paper is devoted

to concrete examples of how the reforms affect construction in the public sector in general, and the hospital service in particular; it constitutes a practical guide to the working of the reforms.

CONSTRUCTION METHODS AND BUILDING MATERIALS

155. DADDI, I. **The HSM system for the construction of hospitals. (Italy).** *Acier, Stahl, Steel*, Brussels, 1975, Jan., vol. 40, no. 1, pp. 24-29.

A working group was set up two years ago in Genoa to deal with the reconstruction and extension of the San Martino Hospital. The group studied a system of standard units, deriving its inspiration from British and Canadian models, but correcting their lack of flexibility and covering the case of large complexes of between 200 and 1,000. This paper presents some of the basic ideas and some solutions adopted in finalizing the system which has been named HSM (Hospital San Martino) after its first application. The 10 cm. international module was chosen as the basic model. For horizontal measurements a module M=90 cm. was chosen. The module must be inserted in an overall grid of 1.80 m.=2M. This grid is composed of square 'effective' links the side of which has a length of 10.80 m., that is 12M. This value was chosen because 12 is the lowest number having many sub-multiples, that is 1, 2, 3, 4, 6 and 12. The basic units are described and there are plans and photographs of the system in use.

HOSPITAL DESIGN

See also Abstract No. 174

156. BOBROW, M. L. and THOMAS, J. **The evolving health care system: a framework for design.** *Architectural Record*, New York, 1975, Sept., no. 9, pp. 122-124.

Recent changes in health care delivery cast serious doubts on the ability of contemporary hospitals to satisfy evolving needs. The hospital must prepare to respond to the following current and emerging trends: (i) increased federal government participation; (ii) regionalization of facilities; (iii) restrictions on additional beds; (iv) changes in requirements for in-patient units; (v) increased use of out-patient services; and (vi) increased difficulty in financing. The design of specific facilities must therefore flow from a recognition of both the broad context of health care delivery and the specific role of the individual hospital. The architect must satisfy two new related design problems: producing a strategy for the existing hospital's growth and evolution, while responding to the need for establishing a visual language to guide the patient, the visitor and the staff, in the use of the evolving building. Finally, architects must be aware of the fact that a building communicates to its users an idea of the institution's self-perception and relationships with the user.

157. LUGTHART, W. F. Ontwerpmethodiek voor algemene ziekenhuizen en verpleeginrichtingen. **[Planning methods and techniques for general hospitals and nursing homes.]** *Ziekenhuis*, Utrecht, 1975, Oct. 1, vol. 5, no. 19, pp. 474-480.

To reduce the costs of building a hospital a firm of architects has developed a plan which shortens the preparation and building periods and consequently reduces the

interest to be paid on borrowed capital. The method is based on the principles of interchangeable building units, low-rise building and built-in provision for expansion. In this way a small hospital can be started with little capital, commissioned, and extended at later stages. An example is given of a hospital in Diemen, Netherlands, and the following are discussed in detail: basic starting points concerning norms on bed and working spaces, layout, special requirements; standardization of building units and measurements; preparation period of decisions and approval; the object of a low-rise (three-storey) building; the layout of the ward floors; the savings by reducing the building period from 3½ to 2 years; the commissioning of the hospital and expanding in stages; and the internal transport system. Detailed plans plus a description of the ground and second floors are included.

DESIGN OF INDIVIDUAL GENERAL HOSPITALS

158. **Master plan for Concord moves with changing times.** *Architectural Record*, New York, 1975, Sept., no. 9, pp. 116-117.

A series of random additions to Emerson Hospital, Concord, Mass., between 1911 and 1957 had created an obsolete complex in which both growth and efficiency were inhibited. A master plan drawn up in 1961 (architects: Payette Associates) has provided for replacement and vertical and horizontal expansion in conformance with today's changing patterns of care; revisions to the plan were made in 1967 when it was decided to erect a doctors' office building. Strict attention has been paid to interior amenities. Six photographs and a site plan are included.

159. **New access and a new wing on a sloping site in Ware.** *Architectural Record*, New York, 1975, Sept., no. 9, pp. 120-121.

Expansion and remodelling of Mary Lane Hospital, Ware, Mass., according to a master plan drawn up in 1968 (architects: Payette Associates) has involved: (i) a new wing, with two horizontally expansible floors for services and vertically expansible nursing floors above; (ii) conversion of the existing nursing block to light care and doctors' offices; and (iii) use of an existing building as the service entrance. Six photographs and site plan are included.

160. **P & W designs a new core for an Illinois complex.** *Architectural Record*, New York, 1975, Sept., no. 9, pp. 112-113.

A new central core building for Ingalls Memorial Hospital, Harvey, Ill. (architects: Perkins & Will) provides a new main entrance hall, receiving and executive sections and an additional 200 beds. At the same time existing facilities have been upgraded to create a warm, rich, non-institutional atmosphere. Warm light tan metal and wood furnishings have been used throughout the hospital, with accent colours of blue, orange, red and gold. Plans of the first and second floors and a typical nursing floor and six photographs are included.

161. COWPER-SMITH, F. **A five-star hospital.** *Nursing Mirror*, Sutton, Surrey, 1975, Dec. 11, vol. 141, no. 24, pp. 41-42.

The new St. Anthony's Hospital, Cheam, Surrey, run by the Filles de la Croix, has

been designed for the patients' comfort as well as for nursing care. There are 80 single rooms grouped in four sections or wards, each ward containing 20 rooms. There are two floors with two wards on each. The interior design of the hospital is described. Several new features have been incorporated into the hospital: (i) an administrative control centre on each floor to help with enquiries and admissions and to operate the nurse communication system; (ii) a supply processing and distribution department, similar to a central sterile supply department, but with responsibility for all supplies to wards; and (iii) a nurse-server incorporated into each bedroom to save time for the nurse and to co-ordinate with the supply system. The cost of building the hospital was around £1¼ million. It has its own pharmacy, pathology laboratory, diagnostic X-ray department and operating suite. There are six photographs but no plans of the hospital.

162. PITON, A. Le nouvel hôpital des Chanaux. **[The new Chanaux Hospital.]** *Techniques Hospitalières*, Paris, 1975, Oct., vol. 31, no. 361, pp. 83-90.

The new 446-bed Chanaux Hospital, Macon [architect: Daniel Petit] cost 72,000,000 French francs and took only 30 months to build. Its total area is 12,700 sq.m. Features include a large admission area with comfortable armchairs, shops, hairdressers' salons, and telephone booths. Half of the accommodation is in double rooms, the rest in single or four-bed units. A self-service staff canteen on the fifth floor has panoramic views over the Saône valley and the hills of Beaujolais. It is connected with the central kitchens on the ground floor by service lifts. Air-conditioning is installed throughout. In operating theatres, X-ray departments, and other special departments this is provided through low-pressure air-conditioning ducts. Corridors are at least 2.25 m. wide so that the patient may be wheeled around without having to leave his bed. Special goods lifts transport dirty beds and linen to the laundry and there are three electronically-controlled fast lifts and seven lifts for patients. There are four photographs, but no plans of the hospital.

163. Das Bürgerspital Solothurn. **[Solothurn City Hospital.]** *Veska*, Aarau, 1975, Sept., vol. 39, no. 9, pp. 423-436.

New buildings at this hospital include a 304-bed, 14-storey ward block, seven-storey treatment block and three-storey radiology department. The layout of these three buildings and the technical installations are described in some detail. Patients' rooms have from one to six beds. Some details of the organization and staffing of the hospital are given. Plans and photographs are included.

164. GROOT Ziekengasthuis te 's-Hertogenbosch. **[Great Hospital, 's-Hertogenbosch.]** *Bouw*, Rotterdam, 1975, Feb. 15, vol. 30, no. 7, pp. 131-133.

The renovation of the 'Great Hospital' (architects: Kirch, Hermans, Van der Eerden, Leiden/'s-Hertogenbosch) was carried out in stages. The new complex consists of two parallel ward blocks of seven and eight floors respectively with, at right angles, on their west side a two-storey building accommodating the visitors' hall, rehabilitation department and administration, and on their east side a five-storey medical block. Each floor in the ward blocks has a 'double' ward unit, comprising 48 beds in four-bed, double, single and isolation rooms. Each room has its own sanitary facilities. The two upper floors of the eight-storey block accommodate the children's department. The medical

block, which houses admission, casualty, out-patient, diagnostic X-ray, and treatment departments, operating theatres and laboratories, links the ward blocks and leads on to the old part of the hospital which still contains most of the out-patient department. The buildings are constructed of concrete founded on steel, with brick façades to blend with the old surroundings. The finish is plain and solid. The paper includes plans and photographs.

165. Juliana-ziekenhuis te Apeldoorn. **[Juliana Hospital, Apeldoorn.]** *Bouw*, Rotterdam, 1975, Jan. 18, vol. 30, no. 3, pp. 51-54.

This complex (architects: Kruisheer and Hallink, Rotterdam) comprises a 440-bed hospital, a nurses' home and a building for technical services. The hospital is part four storeys and part eight storeys high. All treatment departments are on the ground floor and domestic and technical services are in the basement. The wards are on the upper floors with exception of the eighth floor which accommodates staff. Two floors have administrative offices at the front. The design is flexible, leaving scope for the addition of four more storeys and an extra wing. The main construction of the hospital is metal framework combined with prefabricated concrete beams and light-weight walls. Most of the paper is taken up with building details, such as changes in the original design, choice and economy in building materials, and area measurements. A site plan, floor plans and photographs are included.

166. Lukas-ziekenhuis te Apeldoorn. **[Lukas Hospital, Apeldoorn.]** *Bouw*, Rotterdam, 1975, May 10, vol. 30, no. 19, pp. 375-379.

This 458-bed regional and general hospital (architects: Van den Broek and Bakema, Rotterdam), came into use on 12 December 1974. To avoid the appearance of 'a mass of concrete in the forest', the grounds are landscaped with greenery and curved approach roads and the outlines of the buildings are broken through variety in the heights and sizes of different sections. The tall ward block, for example, has a 'nick' in the centre which optically shortens the adjoining three-storey technical building and the restaurant. Kitchen and stores are underground with sloping approaches and there are bridged connections between various treatment sections. The outside finish is light-coloured façades combined with pine-green for roofs. The windows have anthracite-coloured polyvinyl chloride frames and sun-reflecting, heat-insulating glass. The natural stone and green scheme of the forecourt is carried through into the inside hall and the natural element is continued throughout the interior in the form of wooden ceilings, plants, plasterwork, etc. For both general and private wings the same materials were chosen for floor coverings, etc.; subdued colours are used to leave scope for personal tastes. The paper includes photographs, plans and other drawings.

167. ALM, E. En kortfattad beskrivning av Sundsvalls sjukhus. **[A brief description of Sundsvall Hospital.]** *Sjukhuset*, Stockholm, 1975, vol. 52, no. 10, pp. 553, 555, 557.

Sundsvall Hospital (architect: E. Alm, of Pütsep's Arkitektkontor), together with its nursing home, a sheltered workshop, a nursing school and central kitchens, covers over a million square metres. The guiding principle was that all rooms should have access to daylight. There are two underground levels (culverts), the lower for transport of dirty materials. The upper, for clean transport, is connected to the unloading bay

and the central stores, kitchens, dispensary and sterilization department. The ground floor houses out-patient and acute admission departments, and entrances to the vertical communications facilities. The first floor contains doctors' offices for the various departments, sited above the relevant admissions area. The ward floors have beds for a total of 1,066 patients in double units of 30 beds each (i.e. 60 beds to a ward) and there are 84 emergency and intensive care beds. A single corridor system with decentralized sluices makes it unnecessary to remove bedpans from the ward. The intake population comprises 120,000 inhabitants, with an annual estimated out-patient load of 200,000 visits. The paper is illustrated by seven diagrams demonstrating stages in the planning work, an axonometric perspective and a table showing bed allotment by ward.

168. OLANDER, S. and OSKARSSON, R. Sundsvalls sjukhus. **[Sundsvall Hospital.]** *Sjukhuset*, Stockholm, 1975, vol. 52, no. 10, pp. 531, 533-534, 536-537, 539-541, 543, 545, 547, 549, 551.

In 1958 it was decided to build a new 800-bed hospital in Sundsvall to replace the buildings erected since 1875. In 1968 a site office was installed in an old nursing home, housing the 70 consultants working on the building plans. The team had a weekly meeting with the hospital director, who was assisted by his heads of department. A total of 269 patients were transferred on 8 September 1975 and the orthopaedic department, children's, infectious diseases, and chest clinics, and psychiatric services were transferred in subsequent stages. There are some 4,000 staff, including a staff pool of 150 to fill gaps caused by sickness, etc. Among the staff categories are 575 auxiliary nurses, 430 nurses, 175 doctors, 95 two-year-trained nurses, 100 kitchen staff, 150 cleaners and 45 porters. The paper is illustrated by ground plans of the old and new hospitals, a construction project organization diagram, and three photographs.

DESIGN OF SPECIAL HOSPITALS OR UNITS

See also Abstract No. 296

169. **Younger chronic sick unit.** *Hospital and Health Services Review*, London, 1975, Nov., vol. 71, no. 11, pp. 394-395.

Hamlet House, in the grounds of St. Francis' Hospital, Dulwich, is the most modern of a series of units designed for younger chronically disabled people. It has accommodation for 26 residents in four four-bed, two double and six single rooms. Other facilities include a large general purpose dining/communal room, activities room, quiet sitting-room, overnight accommodation for relatives and friends, assisted bathrooms and toilets, hairdressing room, recreation area and nurses' station. There are facilities for 10 day patients and there is provision for six patients to be admitted on a short-stay basis for assessment and rehabilitation and to provide holiday relief for relatives. Photographs of the exterior and a typical single room are included.

170. GOLAZ, A. Établissement médico-social des Pâquis, Morges. **[Pâquis medico-social establishment, Morges.]** *Veska*, Aarau, 1975, Sept., vol. 39, no. 9, pp. 416-422.

The new building at this hospital for the elderly has 58 beds in single, double and three-bed rooms and accommodation for eight staff. The architects concentrated on

providing a homely atmosphere in lounges, dining-rooms and recreational, occupational and physiotherapy areas. The patient units occupy the western side of the ground, first and second floors. The hospital forms part of the new regional hospital, which provides medical, administrative, laundry and catering services. Ten photographs and plans of each floor are included.

171. Verpleeghuis te Driebergen. **[Nursing home at Driebergen.]** *Bouw*, Rotterdam, 1975, June 14, vol. 30, no. 24, pp. 475-477.

The nursing home 'Nassau Odijckhof' (architect: J. Lengkeek, De Bilt) is set in wooded, slightly hilly country and comprises a main building for 124 patients, a home for 60 nurses and a block of four houses for staff and their families. The main entrance, three metres above ground level, is approached via a slope over the roof of the ground floor parts of the building. Surrounding the entrance hall are administrative offices, reception hall and recreation rooms, together forming the 'heart' of the building, away from the main streams of inside traffic. On the ground floor, accessible from the road, are the restaurant, domestic offices and technical services. On the second floor are the treatment departments. Fanning out east and west from this centre block are two two-storey nursing wings, of homely design with sitting-rooms, dining recesses, cosy nooks, balconies and south facing terraces giving on to gardens which blend in well with the surroundings. A plan and photographs are included.

172. BRENGANDÉ, B. J. **Modular units offer design flexibility.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 66-69.

A model design for a free-standing day surgery unit is described and illustrated. It would need at least 10,000 sq. feet, cost $55 to $65 per sq. foot to build and about $375,000 to equip. The design is broken into four modules and provides maximum flexibility and desirable flow lines. The modules are: (i) admissions, which consists mainly of the waiting room and administration offices; (ii) 'holding/recovery', including diagnostic X-ray area, changing rooms and recovery and holding beds; (iii) four operating theatres with the sterile set-up room in the centre; and (iv) entrance, dispersal and exit point for all staff, materials, drugs and equipment, clean-up room and sterilizer room. The emphasis throughout is on smooth flow patterns and this is well illustrated in the plan included in the paper.

173. Eduard Douwes Dekkerhuis te Amsterdam officieel in gebruik genomen: psycho-geriatrisch verpleeg- en verzorgingshuis biedt onderdak aan ruim 280 bewoners. **[Eduard Douwes Dekker Hospital, Amsterdam, officially opened: the psycho-geriatric nursing home offers accommodation to some 280 patients.]** *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1975, Nov. 11, vol. 44, no. 1088, pp. 864-867.

Eduard Douwes Dekker House (architect: J. P. Kloos, Heemstede) comprises an eight-storey residential home for non-invalid elderly people and a five-storey nursing home for psychiatrically disturbed elderly people. Both homes are connected by low-rise buildings containing the main entrance, administrative, domestic, and technical services, laboratories, conference rooms, and staff restaurant. The nursing home, for 120 patients (30 on each of the four ward floors) has 24 four-bed, eight double and

eight single bedrooms, 12 sitting-rooms and areas for treatment and recreation. A total of 250 staff are employed and a creche is provided for 25 children. Six photographs and a ground plan are included.

WARDS AND PATIENTS' ROOMS

174. THOMPSON, J. D. and GOLDIN, G. **The hospital: a social and architectural history.** New Haven & London, Yale University Press, 1975, xxviii, 349pp. £13.75

This book is about the hospital ward, nursing unit, or in-patient unit and is in four parts: (i) a history of nursing unit floor plans since Roman times in some European countries and the United States; (ii) a review of contemporary planning problems in the United States and Great Britain; (iii) the Yale Studies in Hospital Function and Design, which were concerned with hospital problems of today and particularly with the evaluation of a scientifically above-average ward plan, that of the Memorial Unit, Yale-New Haven Hospital; and (iv) a consideration of the structure and possible future applications of the concept of progressive patient care. The book includes 263 photographs, plans and diagrams and a bibliography.

DESIGN OF SPECIAL COMPONENTS

175. **Fiberglass-plastic wall panels save weight and field labor on a 12-story hospital tower.** *Architectural Record*, New York, 1975, Sept., no. 9, p. 128.

George Hubbard Hospital, Nashville, Tenn., has a 12-storey cruciform tower and a four-storey extension. The two are clad with fibreglass-reinforced-plastic spandrel panels up to 100 feet in length. The panels, which weigh about 75 pounds per foot, are laid up in moulds that are relatively inexpensive when compared with metal-stamping dies. The panels were designed with moulded-in steel straps for mounting to the supporting steel tubes attached to the binding frame. Three photographs and a diagram are included.

GUIDING AND SIGNPOSTING

176. Universeel bewegwijzeringssysteem 'Teleroute'. **[The universal signpost system 'Teleroute'.]** *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1975, Nov. 11, vol. 44, no. 1088, pp. 873-874.

The 'Teleroute' signposting system, designed for use in hospitals and other large buildings, is based on a system of pictograms. The picture symbols are simple and clear to understand, code colours are distinct and written language, though used, plays a secondary role. Pictograms and texts can easily be changed if required. There are two types of sign: (i) sets of strips, each strip showing the pictogram, the written indication and the direction arrow; and (ii) square plates with four pictogram panels. Either type can be suspended from the ceiling, mounted at right angles or flat against the wall, or supported on brackets. Each is available with or without illumination. There are a number of accessories, such as sets for outdoor use, for use on counters and pictogram holders to be attached to doors. The paper includes two photographs.

ENGINEERING SERVICES

INSTALLATIONS IN GENERAL

177. DOWELL, R. J. and others. **Engineering services of the Mark 1 best buy hospital.** *Hospital Development*, London, 1975, Nov./Dec., vol. 3, no. 6, pp. 11-14.

The engineering services of the two 'best buy' hospitals—West Suffolk District General Hospital, Bury St. Edmunds, Suffolk and Frimley Park District General Hospital, Frimley, Surrey are compared and discussed. These two district general hospitals, of 540 beds, were designed and erected in a minimum time at minimum cost, and are built as two-floor constructions with many open courtyards on a 20-acre site. The services have been concentrated in the centre of the complex, leaving the front and rear sections for a continuous ward band and other less heavily serviced areas, e.g. out-patient department. Accommodation for in-patients is on the upper floor. In both hospitals the central sterile supply unit and laundry facilities are off-site; the theatre sterile supply unit autoclaves and sterilizing facilities for air-conditioning plant cooler batteries are thus the only essential steam loads on site. The engineering and electrical services are briefly described. Internal lighting is by five-foot fluorescent fittings with colour matching tubes in ward areas. A radio-television network has been installed. The engineering for public health presented special geological problems which have now been overcome.

ARTIFICIAL LIGHTING

178. ASSOCIATION FRANÇAISE DE L'ÉCLAIRAGE. Recommendations relatives à l'éclairage des hôpitaux et des établissements de soins. **[Recommendations on the lighting of hospitals and institutions.]** Paris, LUX-Societé d'éditions de propagande, 1975, 31pp.

This publication makes recommendations on: lighting levels in the various hospital areas; exterior lighting; lighting in patients' rooms; lighting in technical departments; lighting in other areas; safety lighting; sources of light; light fittings; and electrical installations. Included as appendices are a short glossary and a list of French regulations on lighting. Numerous diagrams are also included.

COMMUNICATION SYSTEMS

179. JONES, R. G. **Telecommunications in hospitals.** *Hospital Engineering*, Stevenage, 1975, Dec., vol. 29, pp. 3-7, 9-10.

There are few hospital departments where electronics have not been used, but the full potential for communication systems has yet to be realised. Currently the telephone is the main communication system; however the concept of the centralized communications system should be considered. This would provide a radio staff location system; two-way speech from every bedside and all departments to the communication centre: and a computerized visual display unit at the central unit. The information

system within the unit can be used to produce up-dated lists of beds, admissions, patients or meals, which would result in a saving of costs and labour. Technical information, priority staff calls, medical, security or gas alarms can be accommodated, together with control of equipment and supplies. The central processing unit of the system is a minicomputer, with a simple cabling system. The total cost would depend on the number of programs required, but a substantial saving in costs and an increase in efficiency would result.

BOILERS AND BOILER HOUSES

180. ADDISON, J. P. and EDWARDS, A. K. **A boilerhouse safety alarm.** *Hospital Engineering*, Stevenage, 1975, Nov., vol. 29, no. 16, pp. 27-30.

An automatic safety alarm system was designed and installed at New Cross Hospital, Wolverhampton. It links the boilerhouse to any continuously manned position in the hospital grounds, in this case the telephone switchboard. The alarm system is automatically switched on and off and is in operation during the period when the boiler operator is completely alone. Alarms are sounded within the boilerhouse every hour, and the operator has three minutes to reset the alarm. If he fails to reset it, the link to the continuously manned position is set off and emergency action is taken to rescue the boilerhouse operator. The details of the system and its electrical components are given.

VENTILATION AND AIR-CONDITIONING

See Abstract Nos. 232, 240, 256

MAINTENANCE OF BUILDINGS AND EQUIPMENT

181. BRAGG, D. J. **Scheme for a planned-preventive-maintenance system.** *Hospital Engineering*, Stevenage, 1975, Nov., vol. 29, no. 16, pp. 5-7.

Planned preventive maintenance (PPM) is the careful lubrication and servicing of equipment, frequent inspection and immediate repair of defects detected before they have developed to a critical stage. Any method of extending the work life of plant and machinery which does not involve excessive costs must be developed with maximum effect, and the use of PPM results in 65 to 70 per cent fewer breakdowns at the end of an initial two-year period. The work load is evenly spread throughout the year and accurate budgetary control with positive calculation of staff requirements can be provided.

182. MERCHANT, R. S. **Administrative responsibility for the use of electronic devices in hospitals.** *Hospital Topics*, Neptune, N.J., 1975, Sept./Oct., vol. 53, no. 5, pp. 32, 34-35.

Whether technical services for the maintenance of electronic equipment are provided by an in-house full-time staff, by shared service with another hospital, or by contract, the service must provide certain essentials of quality. This paper describes these essentials and compares the requirements, advantages and drawbacks of each type of service.

EQUIPMENT, FITTINGS, FURNITURE

INTERIOR DECORATION

See also Abstract No. 160

183. ÖRDELL, H. Konstnärlig utsmyckning av Sundsvalls sjukhus. [**Artistic decoration of Sundsvall Hospital.**] *Sjukhuset*, Stockholm, 1975, vol. 52, no. 10, pp. 559-560.

Every room at the new Sundsvall Hospital has at least one of the 2,000 works of art purchased for the hospital, whilst 250 originals were transferred from the old buildings. Reproductions and similar items in the old hospital were abandoned. A group of textile artists was commissioned to produce a series of printed and woven textiles, the three canteens being exclusively decorated with textile art. All corridors are decorated with painted murals, two photographs of which are included.

184. **Art for the patient's sake enhances long-term care facility.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 33-34.

Sunnybrook Medical Centre, Toronto (architects: Bregman and Hamann) has an extended care wing for 400 long-stay patients, mainly veterans [see *Hospital Abstracts*, Vol. 15, Abstract 1541]. Treatment is primarily recreational, since the diagnostic, rehabilitation, and central supply services are provided in the active treatment section of the Medical Centre. The objectives in designing the wing were to maintain the patients' interest in their environment, and to promote independence. To create interesting surroundings there is a large collection of Canadian art and artifacts. The lounges, two to a floor, are each decorated in a central theme, e.g. the Marine Lounge has aquariums with freshwater fish, a replica of a sailing ship and nautical photoprints. Patients' rooms are four-bed, double or single with ample space within each room. The design of the furniture and fittings has been especially adapted for handicapped patients, many of whom are in wheelchairs. The wing is surrounded by a sheltered courtyard and garden for the patients.

BEDS, COTS, ETC.

See also Abstract No. 248

185. LÖWENDAHL, R. Sjukhusbädden—ett område för nytänkande. [**Hospital beds—an area for new thinking.**] *Sjukhuset*, Stockholm, 1975, vol. 52, no. 10, pp. 573-575.

The Swedish Textile Research Institute has investigated the microclimatic conditions in the normal hospital bed and established that temperatures and humidities are far too high in areas in contact with the skin. The humidity was 30 per cent higher with a plastic sheet under the bottom sheet than without. Results of research with robots which gave off heat and humidity and automatically recorded the results proved to be fully comparable with results from human testers, and will be used in future full-scale hospital trials. The Swedish hospital system currently possesses some 140,000 beds, of

which about 40,000 (rising to 60,000 by 1985) are occupied by long-stay somatic patients, the majority of whom are incontinent. Contact should be made with the staff, patients, the authorities and the furnishing industry to lighten the work load round the hospital bed and to develop new types of bed for the various categories of patient. The paper is illustrated with a cutaway diagram of a traditional hospital bed and diagrams of the results ot the research discussed.

SURGICAL EQUIPMENT

186. LAKIE, M. H. and MCELROY, A. R. **Surgical instruments and dressings: an information service.** *British Medical Journal*, London, 1975, Nov. 22, vol. iv, pp. 448-450.

The provision of a regional information service on surgical equipment, instruments and dressings, to be staffed by information scientists would reduce the time spent on administration. The existing services are examined and proposals for a new service submitted. The information would be obtained from trade publications, published papers and informal, unpublished information exchanged among colleagues. The system would be kept up to date, and an index produced regularly. The advantages of the system would be to reduce administrative tasks, improve service to the patient and save money.

ELECTRONIC EQUIPMENT

See Abstract No. 182

STAFF GENERALLY

STAFF COMPLEMENTS

See Abstract Nos. 195, 280

RECRUITMENT

See Abstract Nos. 193, 196

CONDITIONS OF SERVICE

See Abstract No. 197

SALARIES AND SUPERANNUATION

187. SALKEVER, D. S. **Hospital wage inflation: supply-push or demand-pull?** *Quarterly Review of Economics and Business*, Urbana, Ill., 1975, Aug., vol. 15, no. 3, pp. 33-48.

Two alternative methods for examining hospital wage inflation are given: (i) the demand-pull theory—that rising wages are primarily caused by the growing demand

for hospital services; and (ii) the supply-push theory—that wage inflation is caused by economy-wide labour market trends which radically alter the labour supply conditions affecting the hospitals. Empirical analysis is restricted to the wages of unskilled female staff since this group is more responsive to changing labour market conditions than trained technical staff in hospital jobs. Analysis of the former group should also provide a clear indication of the effects of trends in the labour market. On the basis of both regression results and evidence from other low-wage industries it may be concluded that supply-push forces are an important source of hospital wage inflation, although the impact of demand-pull factors is questionable. Greater analysis of these theories is needed in order to obtain a more definitive and comprehensive understanding of hospital wage inflation.

STAFF MANAGEMENT

188. MITCHELL, S. **Participative management: theory and practice in the Health Service.** *Health Services Manpower Review*, Keele, 1975, Sept., vol. 1, no. 3, pp. 4-7.

This paper outlines the development of participative management in the National Health Service and discusses the need for it. It also explains what participative management is and is not, how it works and its development, maintenance and evaluation.

189. BUCHAN, J. R. and SULLIVAN, W. G. **The mixed standard merit rating system applied to hospitals.** *Hospital Topics*, Neptune, N.J., 1975, Sept./Oct., vol. 53, no. 5, pp. 22-26, 54.

The Mixed Standard Scale has been adapted successfully by several Tennessee hospitals for evaluating the performance of staff. The rater faces three degrees of each trait to be rated and must respond to all of these in some manner. If the employee rated is better than the description, + is indicated; fits the description 0; or worse than the description —. The score on each trait depends on the combination of zeros, plusses and minuses assigned by the rater. The dependability and reliability of the ratings are discussed. Implementation of the system in the nursing service at East Tennessee Baptist Hospital is described.

STAFF TRAINING

See Abstract Nos. 198-202, 206-208, 225, 226, 243, 270, 271

STAFF WELFARE

190. BLUESTONE, N. **Employee health services: one hospital's experience.** *Journal of Occupational Medicine*, Chicago, 1975, April, vol. 17, no. 4, pp. 230-233.

An analysis of the Hospital Employee Health Service at the 1,600-bed Bird S. Coler Memorial Hospital and Home, New York City, demonstrated that in 1972 the standard and quality of care had greatly fallen. Under increasing pressures the aims could no longer be maintained and the service had deteriorated into a poorly run out-patient

clinic. Various methods were implemented to restructure the service: (i) the philosophy of the service was redefined, all cases of sick patients being referred to the appropriate hospital department, whilst the service maintains a policy of preventive treatment and care for the healthy; (ii) increased staff health education replaces continuous care; (iii) greater personal contact has been established through a nurse screening system and also through helping to assess health insurance claims for patients; (iv) the service will supplement the employee's current medical care; (v) greater contact with union representatives; and (vi) closer contact between doctors, staff and patients.

191. IWARSON, S. and others. **Hepatitis B immune serum globulin and standard gamma globulin in prevention of hepatitis B infection among hospital staff: a preliminary report.** *American Journal of the Medical Sciences*, Thorofare, N.J., 1975, Sept./Oct., vol. 270, no. 2, pp. 385-389.

The annual attack rate of clinical hepatitis B in the staff of three departments in Sahlgren Hospital, Gothenburg, had been five to eight per cent during recent years. In May 1973 a controlled double-blind trial was started with prophylactic injections of hepatitis B immune serum globulin (antibody titre by passive haemagglutination 1:355.000) and standard gamma globulin (1:100). A total of 118 members of the staff were prophylactically treated while 125 who were unwilling to participate received no prophylactic treatment. During the first 20 months of the study nine cases of clinical hepatitis B with jaundice occurred within the untreated group (7.2 per cent) while three cases (2.5 per cent) were observed in prophylactically treated individuals. After decoding it was found that 60 individuals had received specific hepatitis B immune serum globulin while 58 had received standard gamma globulin. Two of the three clinical cases of hepatitis B occurred within the standard gamma globulin group. Both groups included two individuals with transient antigenaemia only and the standard gamma globulin group also included four individuals with antibody seroconversion.

SPECIAL CLASSES OF STAFF

ADMINISTRATIVE AND CLERICAL STAFF

192. WHITE, K. J. C. **Let's get the records straight.** *Hospital and Health Services Review*, London, 1975, Nov., vol. 71, no. 11, pp. 389-391.

The value of medical records staff, recent developments in their functions and the need for recognition of their role are discussed. A job description for a district records officer is presented under four headings: preamble; records and patient services; professional and technical; and development of training functions. A national policy is essential and it must be recognized that whilst the medical records and information service is part of the administrative structure, it is nevertheless a specialty within that framework and must have a career structure of its own.

193. WOOD, J. **A personnel study of medical records staff.** *Hospital and Health Services Review*, London, 1975, Nov., vol. 71, no. 11, pp. 391-392.

Reorganization of the National Health Service has allowed many medical records officers to take a more active part in the recruitment of their staff. This has provided an

opportunity to adopt a new approach specifically designed for the needs of the medical records department. Evolution in the last decade has meant that a medical records clerk is no longer just another hospital clerk, but misconceptions about his work persist. A study of turnover in several hospitals shows no surprises and compares favourably with trends in other departments. Many problems of recruitment can be solved by producing a simple hand-out for prospective medical records clerks and for medical secretaries. Advertising needs careful reviewing; advertisements should be eye catching and more specific. Personnel departments have a valuable role to play, but their expertise is best used in conjunction with the medical records officer.

NURSING STAFF

See also Abstract Nos. 225, 249, 253, 280

194. Nouvelle définition de l'infirmière. **[A new definition of the nurse.]** *Gestions Hospitalières*, Mantes, 1975, Oct., no. 149, pp. 687-689.

The role of the nurse in France has not been re-defined since 1946 and the current general dissatisfaction in the nursing profession is thought to be due to nurses' lack of status and their complete subordination to the medical profession. It is suggested that, in addition to their present duties, nurses should be able to participate in decision-making in the fields of health education and the prevention of disease, to organize and co-ordinate nursing care and the training of nursing auxiliaries, and, through further education, themselves maintain high professional standards and ensure that developments in nursing care keep pace with new techniques in medicine and surgery.

195. TRIVEDI, V. M. and HANCOCK, W. M. **Measurement of nursing work load using head nurses' perceptions.** *Nursing Research*, New York, 1975, Sept./Oct., vol. 24, no. 5, pp. 371-376.

A methodology, designed to measure and predict work loads in nursing units, was developed from information obtained from a specially designed questionnaire. The questionnaire was circulated to head nurses of units in a 300-bed short-stay general hospital, and measured the need for additional staff as seen through the eyes of the head nurses. The results indicated that perceptions of need on nursing units were influenced by unit census and available staff on the units. Other variables affecting work load, e.g. patient classification, numbers of new admissions or post-operative patients, did not play a major role in shaping the attitudes of head nurses. The methodology has several possible applications for hospital nursing departments, and may be used to provide a method of calibrating the professional judgements in a hospital regarding the severity of need for nursing care, and for cost and quality control purposes.

196. STOVER, W. R. **Temporary nurse service.** *American Journal of Nursing*, New York, 1975, Nov., vol. 75, no. 11, pp. 1998-1999.

A Monroe County (N.Y.) Health Council Nursing Profile Survey in 1967 revealed that there were 1,446 inactive registered nurses in the county. A questionnaire was sent

to 20 per cent of the nurses and from their answers a correlation between the needs of nursing employers and the availability of inactive nurses was made, suggesting that a temporary help agency should be set up to fill last minute vacancies in hospitals and nursing homes. A commercial agency, Western Temporary Services Inc., was selected to handle the recruitment and placement, acting as the legal employer for the nurse. The costs to the institution hiring the nurse are 35 per cent above the hourly rate which is less than the cost of payroll maintenance for permanent staff. A 24-hour service is provided, and so far more than 500 nurses have registered with the agency's office in Rochester. The director of the agency is able to match nurses with the jobs they prefer. There are now more than 120 offices in Monroe County and a medical services branch has been established to provide qualified staff for the whole health system. Most nurses are hired for general duties but some work in the recovery room, intensive care unit, cardiac unit, nursery or emergency room. There are no costs to the nurse for registering. Many hospitals regularly use the system and some send in orders each week to specify the requirements for each day. The use of the system demonstrates the growing importance of providing temporary staff for the health services.

197. INTERNATIONAL LABOUR OFFICE. **Employment and conditions of work and life of nursing personnel.** (International Labour Conference, 61st Session, 1976, Report VII (1)) Geneva, International Labour Office, 1975, [iv], 108pp. £2.80

This report has been prepared in collaboration with the World Health Organization as a preliminary report for communication to member governments. On receipt of their replies to the questionnaire included, the International Labour Office will prepare a second report summarizing them and suggesting the main points that the Conference may wish to discuss. The report covers: extent of the problem; the nursing personnel system; education and training; exercise of the profession; temporary and part-time work; standard hours of work, rest and annual leave; overtime and exacting and inconvenient work schedules; remuneration benefits in kind and welfare facilities; safety and health protection; social security; careers; and possibilities of international action.

198. LOWE, J. **Games and simulations in nurse education.** *Nursing Mirror*, Sutton, Surrey, 1975, Dec. 4, vol. 141, no. 23, pp. 68-69.

Games and simulations provide nursing education with a technique that encourages student participation. However three factors must be considered: (i) learning must be a student-centred process; (ii) people learn best what they do for themselves; (iii) people are motivated to do what they enjoy. By setting precise objectives games can be successfully integrated into education at all levels. Simulation games are often employed where there is an element of competition, using some form of sophisticated equipment to provide experience of a situation, before exposing the student to reality. Decision-making exercises where a number of problems are presented simultaneously and at intervals for the 'manager' to deal with provide worthwhile experience. To evaluate the place of a game in nurse education six conditions have to be considered: (i) does it teach, and if so what; (ii) how well does it teach; (iii) how do students react; (iv) how many students can play at one time; (v) will the existing course structure be altered; and (vi) what is the cost?

199. ROPER, N. **Collecting patient data.** *Nursing Mirror*, Sutton, Surrey, 1975, Dec. 11, vol. 141, no. 24, pp. 72-74.

In order to record successfully the experience of students in hospitals and to relate their training to nurse education, students were encouraged to keep daily record books. These proved unsatisfactory as there was too much disparity between them. Also, in order to produce a rational policy for the clinical placement of nurses after training, recourse had to be made to the hospital records to supplement the deficiencies in the record books. An experimental survey was developed to determine the various areas of clinical experience available to a training school in Scotland for its students. In four wards of a general hospital (medical, geriatric, surgical and orthopaedic) information for a daily patient profile was taken from each patient's nursing Kardex, medical Kardex and the ward work list, supplemented by the charge nurse, thus ensuring accurate, uniform records for the students. Subsequently, to gain an overall view of the nursing areas available to nurses, 16 wards in a general hospital, four in a maternity hospital, six in a psychiatric hospital and 12 community districts were surveyed, although in the final survey three medical wards, the gynaecology ward and one surgical ward did not participate. The final survey of the nursing carried out in these areas for a period of 24 hours was used for nurse education, as the data was assumed to be a representative sample of nursing experience provided by the clinical areas. The total number of patients surveyed was 774. The information was put on computer, and was used to demonstrate interrelationships of variables through the use of cross tabulations, frequency distributions and measures of central tendencies. No more sophisticated method was needed.

200. WORLD HEALTH ORGANIZATION. **Annotated bibliography of teaching-learning materials for schools of nursing and midwifery.** (Offset Publication No. 19) Geneva, World Health Organization, 1975, xxxii, 449pp. Sw.fr.51.00

This bibliography is divided into two parts: printed material and non-print material. The latter covers films, filmstrips, transparencies, tape, video-tape, etc. Each part is arranged under broad subject headings and has its own author and title indexes and directory of addresses.

201. HOLLOWAY, S. T. and SHELDON, S. S. **Nurses climb the career ladder.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 95-96, 98.

The 700-bed University of Chicago Hospitals and Clinics (UCHC) employs about 3,300 people. Because it is situated in an area of poverty and unemployment wherever possible local people are employed and subsequently upgraded when appropriate. In 1971 a pilot training programme was instituted in which 20 licensed practical nurses from the hospital began a 17-month course leading to an associate of arts degree in nursing. This was a co-operative venture between UCHC, certain state agencies, a local community college and the women's auxiliary of the hospital. The students attended class full-time and worked part-time at the hospital. The most important criterion in selecting the students was their work performance, measured by the supervisor's evaluation form. A member of the hospital's training department acted as counsellor to the students who were encouraged to discuss academic, social or economic problems with her. The 20 students were chosen from 60 applicants. All completed the programme and passed the state board examinations. On return to work in the hospital they were

given a four-week orientation programme and assigned to work in various units. Promotion to registered nurse gave the graduates a much improved salary. The only special cost incurred by the hospital was $10,000 for the students' benefit package. There was a saving in recruitment costs and a possible decrease in staff turnover. A career mobility plan of this kind is an excellent source of trained manpower and an improver of morale.

202. KAM, van der and DIESFELDT, H. F. A. De opleiding van Antilliaanse en Nederlandse ziekenverzorgenden. **[The training of Antillean and Dutch nurses.]** *Ziekenhuis*, Utrecht, 1975, Nov. 5, vol. 5, no. 21, pp. 520-524.

This is the report of a study which compared the results of a group of Dutch student nurses (73 girls, 46 boys) with those of a group of Antillean student nurses (70 girls) over a two-year training period (1971 to 1973). It discusses wastage during the course, the results for specific subjects, unsuitability and educational standards. It was found that of all students just over half completed the course and the majority who left did so during the first year. The principal difficulties of unsuitable students were with practical nursing, physical treatment and psychology. Initially the Antillean students did less well than the Dutch, but this levelled out during the second year and had disappeared by the final examination. The numbers of Dutch and Antillean students who successfully completed the course were approximately equal. Though a certain educational standard was required for entry, the type of education had little effect on achievements. The attainments of the Dutch boys were below those of their female colleagues.

203. CHAPMAN, C. **Participation in the evolution of nursing management structures.** *Health Services Manpower Review*, Keele, 1975, Sept., vol. 1, no. 3, pp. 11-14.

This paper describes the approach that was used to develop an appropriate organizational structure for the 120-bed nursing units in the new district general hospitals at Southampton and Basingstoke by working through the problems that arise with those staff who would be involved in solving them. Following expressions of uncertainty about the role of the nursing officer in the units, a discussion paper was prepared for each site; the areas of uncertainty were expressed as a number of key questions. The paper was then discussed by a number of problem solving groups, co-ordinated and supported by a sociologist; the role of the sociologist is outlined. The development of the work of the groups is described. This method of organizational analysis and development takes some time to achieve results. However, it does enable staff to understand more fully the implications of change on their roles and to devise with their manager, an organizational structure which is appropriate to the demands created by the work and variations in their particular unit.

204. JENSEN, A. C. and FREDSLUND, J. Hvidovre Hospital—en sygeplejeorganisation baseret på delvis selvstyrende enheder: eksperiment med nyt styringssystem indenfor sygeplejen. **[Hvidovre Hospital—nursing based on partially self-administered teams: an experiment with a new system of directing nursing.]** *Sygeplejersken*, København, 1975, Nov. 12, no. 45, pp. 4-8, 20.

The first, 650-bed stage of the 1,200-bed teaching hospital in Hvidovre is now open. Each 58-bed ward is divided into four-bed, double and single rooms, with isolation facilities. A large measure of democracy has been built into the decision-making

processes, to replace the hierarchical form of direction of nursing activities. Nursing is currently the responsibility of six autonomous groups, each under a leader appointed by the hospital to ensure that the group's activities correspond to the aims laid down and that the flow of information is sufficient to enable group decisions to be made on the correct basis. The matron has two assistant matrons, who control the six groups: (i) medicine and dermatology (four wards); (ii) medicine/surgery, gastroenterology and orthopaedic surgery (four wards); (iii) neurology, burns and plastic surgery, urology and nephrology (four wards); (iv) gynaecology, obstetrics, ophthalmology and otorhinolaryngology (four wards); (v) treatment and diagnostic departments (five units) and (vi) ambulatoria (four wards). This decentralization of leadership has freed the matron triumvirate for: long-term planning and development research; administration, teaching, and co-ordinating and representative tasks; and availability for consultation. The Danish Nursing Association is following the experiment to study the reactions of the individual nurse, whilst the hospital is collecting data to evaluate the effects of the system on the development of the nursing service in hospitals.

205. RILEY, P. **Clinical nurse consultant for geriatric services.** *Concord*, London, 1975, May, no. 2, pp. 55, 57, 59.

The role of the clinical nurse consultant is discussed with reference to the field of geriatrics. The clinical nurse consultant acts as a nursing expert in a given field working with medical consultants, participating in research and teaching in a clinical situation. Several teaching hospitals have established such posts at number seven level. The work of the clinical nurse consultant at St. Matthew's Hospital, Tower Hamlets, London, is described.

206. PURCELL, R. **Specialist training in geriatric nursing?** *Nursing Mirror*, Sutton, Surrey, 1975, Dec. 4, vol. 141, no. 23, p. 61.

In spite of the fact that geriatrics is the fastest growing branch of medicine it is still treated as the 'Cinderella' of the National Health Service. A course devised by the Joint Board of Clinical Nursing Studies has the aim of training registered and enrolled nurses to the highest professional standards in all aspects of geriatric nursing in the hospital and in the community. Unfortunately the course, although available throughout the country, is not popular with qualified nurses. However until recently student nurses have not been required to have experience in this field at all. New attitudes must be developed to increase the number of nurses following the courses, and to maintain the status of geriatric nursing in order to be able to care adequately for the increasing number of elderly people.

207. HEGARTY, J. **Passing on assessment skills to charge nurses.** *Nursing Mirror*, Sutton, Surrey, 1975, Dec. 4, vol. 141, no. 23, pp. 62-63.

Assessment of mentally handicapped patients to discover their needs and potential is increasingly important, although there are many instances where, due to lack of staff, this is never carried out. There are few psychologists in psychiatric hospitals, and they are more likely to view the routine re-assessment as time-consuming. Since assessment is usually the responsibility of the psychologist this precludes much routine assessment. The solution may be to delegate much of the routine assessment to nurses who are familiar with the patients, have the manpower and can make fullest use of the results of

the assessments. The first stage of a project at a 600-bed hospital aimed at providing both training and encouragement in the completion of PAC forms for charge nurses and training officers. The results of the training session were analysed. The training was a valuable experience for many, giving new insights into the patients and suggestions for staff training; there is a need for closer inter-disciplinary collaboration to increase professional skills.

208. STRONG, P. G. **The training of care assistants in Denmark.** *Nursing Times*, London, 1975, Dec. 4, vol. 71, no. 49, pp. 1956-1958.

Care assistants in Denmark provide for the daily care, treatment and training of the mentally handicapped either in large central institutions or in smaller residential homes, hostels and related establishments. They are expected to carry out basic nursing care and treatment but they may not administer injections. They care for the patient's health and hygiene and are involved in general household management. There is little difference between the work of care assistants in Denmark and that of nurses for the mentally handicapped in the United Kingdom. The training of care assistants is carried out in the personnel training school, Copenhagen, and consists of two levels: basic training, which lasts three years; and senior training which is an advanced course lasting 17 months. There are two blocks of practical training on the basic course, lasting 12 and nine months, and there are written examinations at the end of each study block. The theoretical content of the curriculum consists of 1,440 hours of lectures and tutorials. Students must be at least 18 for the basic course. The senior course will only accept students with at least 2½ years' experience after the basic course. A considerable amount of research is carried out by the senior student, who is also involved in teaching at the central regional institutions. A new training programme is being developed which has a total of two years' theoretical instruction and one year's practical, the reverse of the existing situation.

OTHER PROFESSIONAL AND TECHNICAL STAFF

See Abstract Nos. 257, 270, 271

ORGANIZATION AND ADMINISTRATION

See also Abstract Nos. 203, 204, 280

209. BLAIN, G. **The hospital as a 'professional' bureaucracy.** *Trustee*, Chicago, 1975, Oct., vol. 28, no. 10, pp. 13-16.

The traditional ideas of 'bureaucracy' and 'professionalism' are examined within the framework of a hospital. There are salient features within both ideas that appear suitable for hospital organization. Factors contributing to the increasing bureaucracy in hospitals include: (i) hospital accreditation schemes; (ii) increasing numbers of hospital staff; (iii) rapid advances in technology; and (iv) the need to prevent mistakes, especially in emergency care. The current challenge facing administrators is to create a new organization that retains all the advantages of a bureaucracy, whilst minimizing the disadvantages, and adjusting to the aims of professionalism. The hospital can

adequately function in this state of 'new bureaucracy' since its own organization is fragmented and decentralized. In order to reconcile the effects of professionalism with those of bureaucracy three factors are necessary: (i) hospital management should evaluate structure and attitudes; (ii) more training schemes are needed; and (iii) experimental administration should be considered in the same light as experimental medicine, and be seen as a method of carrying out new ideas and systems containing the advantages of both professionalism and bureaucracy, and of benefit to both fields.

210. VILLEY, F., DEGARDIN, C. and FELTESSE, H. La gestion intégrée des établissements hospitaliers au Québec. **[Integrated management of hospitals in Quebec.]** *Revue Française des Affaires Sociales*, Paris, 1975, July/Sept., vol. 29, no. 3, pp. 141-151.

In Quebec, employers and employees now pay 0.8 per cent of employees' salaries towards medical care and the Ministry for Social Affairs pays hospital costs. The Government has now purchased most of the hospitals, which are run by private corporations on the Government's behalf. The Government provides a global budget to cover running costs; this is based on the expenditure for the previous year plus an allowance for rising costs. To encourage good management, the hospital may keep at least 10 per cent of any savings achieved. Local community service centres have been established throughout the province to provide preventive medicine, social services, school medical services, home nursing, first aid, and family planning. Community health departments are also being set up in some hospitals; these should eventually incorporate the public health sanitary services, school medical services, perinatal care, and a casualty department.

ECONOMICS OF HOSPITAL MANAGEMENT

211. YETT, D. E. and others. **A microeconometric model of the health care system in the United States.** *Annals of Economic and Social Measurement*, New York, 1975, vol. 4, no. 3, pp. 407-433.

This paper describes the development by the Human Resources Center of a microeconometric model of the health care system of the United States by applying econometric techniques to extensive data. The model treats the microanalytic behaviour of individuals and institutions comprising the health care system, and is structured in terms of five submodels pertaining to consumers, hospital and physician services, physician and non-physician manpower. In each submodel there is an economic market on which demands and supplies from the individuals and institutions interact and on which the allocation of resources is determined. A detailed treatment of participant attributes facilitates study of the distribution impacts of alternative policies. Five preliminary conclusions emerge: (i) demographic information and prices alone are not nearly as effective in explaining demand as the combination of demographic information, prices and health conditions; (ii) the importance of the distribution of the population for the composition of health services provided; (iii) the importance of foreign medical graduates; (iv) the fundamental importance to national health insurance outcomes of the productivity of physicians and other labour inputs in producing out- and in-patient services; and (v) the importance of organizational factors.

BED OCCUPANCY, ECONOMIC USE OF BEDS

212. DAGUE, J. and JOHENNING, P. W. **Simplified method costs only 23 cents per patient day.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 51-55.

The method of utilization review at the 442-bed St. Vincent Charity Hospital, Cleveland, is described. The plan requires minimum use of medical manpower and centres round a nurse who is a member of the utilization review committee. A doctor makes the final decision in all doubtful cases. Each morning the nurse's secretary receives a report from the admitting system containing particulars about patients admitted, their doctors, financial class, length of stay, etc. A review sheet is prepared for each Medicare or Medicaid patient and the nurse reviews the chart for each patient within one working day following admission: if the admission is deemed appropriate an initial length of stay is decided on using norms which have been accepted by the review committee. If the admission seems inappropriate the nurse consults a medical member of the committee and if he agrees the patient's own doctor is informed. An appeal is allowed but if a second committee doctor agrees with the first his decision is final. Medical care evaluation studies are conducted by the medical and surgical audit committees and reports are sent to the utilization review committee for discussion. The programme costs 23 cents per patient day or $2.71 per admission as compared with $8 or $9 per admission for more complicated computer methods. The utilization review form is reproduced in the paper and the advantages of the system are discussed.

213. POSNER, J. R. and LIN, H. W. **Effects of age on length of hospital stay in a low-income population.** *Medical Care*, Philadelphia, 1975, Oct., vol. 13, no. 10, pp. 855-875.

Attempts to monitor and control health care expenditure have focused on factors related to hospital length of stay. Age, in particular, is usually assumed to be an important correlate of hospital length of stay, especially when diagnosis and hospital variables are also taken into account. In an analysis of data representative of Medicaid cases in 23 large New York City hospitals during 1972, these effects turned out to be less clear-cut than generally assumed. Although the first-order co-efficients of length of stay regressed on age and the rank order correlation of the means were statistically significant, such wide differences in length of stay within age groups remained as to reduce the substantive impact of the observed findings. This same pattern of wide variations within age groups persisted even when diagnosis was controlled by use of up to 80 covariant groups. In over half the 80 diagnostic categories, no significant age effects were found. When the age analysis was repeated using 23 hospitals as the covariants, estimated age effects differed between institutions, and a similar pattern of large within-group variation was observed. These findings are interpreted as a warning to health care researchers who might otherwise plan over-sophisticated utilization review systems.

214. MCARDLE, C., WYLIE, J. C. and ALEXANDER, W. D. **Geriatric patients in an acute medical ward.** *British Medical Journal*, London, 1975, Dec. 6, vol. iv, pp. 568-569.

A weekly study of bed occupancy was carried out in a teaching hospital for nine months. All the patients were under the care of one consultant and came from the female medical ward. The study was initiated since it is becoming increasingly difficult to admit acutely ill medical patients to the wards, as there appears to be a serious

shortage of beds, and in many cases those who would have benefited from the specialized care of teaching hospitals could not be admitted. During the study 160 out of 482 bed weeks were accounted for by 11 geriatric patients who had completed treatment and were awaiting alternative accommodation. The total cost was £28,576 for the stay of the 11 patients in the teaching hospital whereas in a geriatric hospital the cost would have been £7,841.60; thus £20,734.40 would have been saved had there been more geriatric and local authority beds. There is a chain reaction: acute medical receiving beds are blocked because the acute medical beds to which patients should be transferred are blocked by patients who should be in geriatric beds; but these are blocked because there are too few local authority beds to receive patients discharged from geriatric wards.

DATA PROCESSING

See also Abstract Nos. 220, 264, 266, 267, 292

215. **Evaluation of health service computer projects: meeting at the Scottish Health Service Centre.** *Hospital Equipment & Supplies*, London, 1975, Oct., vol. 21, no. 10, pp. 36-39; Nov., vol. 21, no. 11, pp. 22-25.

A general forum for the presentation of views and experiences on the subject of evaluation of health service computer projects was held at the Scottish Health Service Centre. Some methods currently in use for evaluation in the United Kingdom were examined in the light of the Department of Health and Social Security's policy. Three types of evaluation were studied: (i) project; (ii) application; and (iii) technical, and the objectives assessed. Consideration was given to the relevance of these projects to health service computing projects in Scotland.

216. NATIONALE ZIEKENHUISRAAD. NZR-nota automatische informatie-verwerking. **[NZR note on mechanized information usage (in various types of hospital)].** *Ziekenhuis*, Utrecht, 1975, Nov. 5, vol. 5, no. 21, pp. 517-519.

A committee, appointed by the Dutch National Hospital Council, has worked out a phased plan to develop an inter-hospital automated information system. It recommends that the system should be organized within a regional framework and proposes the setting up of 15 to 20 groups of experts, mainly drawn from the hospitals, on technical matters, information and organization. Outside experts should, however, be drawn in when required. The first step in the programme is to specify every function suitable for mechanization. Regions should then be appointed for drawing up the documentation and decisions made on groups of projects together with a list of priorities. Tests should be carried out in one or more hospitals and the costs assessed. A 2½-year time-table is given.

217. HAMFELDT, A. and HAHN, T. Väl sörjt för datorkraft på Sundsvalls sjukhus. **[Sundsvall Hospital well supplied with computer facilities.]** *Sjukhuset*, Stockholm, 1975, vol. 52, no. 10, pp. 563, 565, 567, 569.

Sundsvall Hospital is unusually well supplied with computer facilities. An S/7 laboratory data collection system processes raw values and an S/3 system, operating a KLS program, processes raw values, complex standard curve calculations, method checks, and degrees of variance from standard frames of reference. During the running-

in period, the number of laboratory tests increased from 300,000 to 1,200,000. The Patient Administrative Programme (PAS) has been integrated with the laboratory programme in the other computer facility. This is an IBM 370/145, operated by Norrdata. It has a primary memory of 768K and a six-disc memory, each containing a million bits. Excess capacity is leased to local banks. The main routines handled are: the PAS, which registers patients, administers waiting lists, bills, receipts and statistics, etc., in association with printout terminals which respond to the patient's insurance number; clinical chemical information; preliminary diagnoses; dosage recommendations on the basis of the patient's height, weight, age and diagnosis; and rapid laboratory test results. Future applications include an automated case-history record compiled immediately on admission.

LIBRARIES

218. SABROE, B. Hospitalsbiblioteket i teori og praksis. **[Hospital libraries in theory and practice.]** *Bogens Verden*, København, 1975, vol. 57, no. 1, pp. 19-22.

The author, who has been librarian at a small provincial hospital for two years, describes her work. Medical, nursing and other staff need to know what facilities the library can offer to patients; the hospital staff magazine is a good means of contact. The duties and functions of the librarian and other library staff are outlined and some of the more popular literature is identified.

219. BERG, V. G. Barnkulturen: Barn på sjukhus. **[Cultural activities for children: children in hospital.]** *Biblioteksbladet*, Lund, 1975, vol. 60, no. 8, pp. 129-131.

The children's library at the 225-bed St. George's Children's Hospital, Stockholm, is housed in new accommodation. The child in hospital is more impressionable than at home, and presenting books is quite strenuous. Each ward is visited once a week for about two hours, but the library is open two mornings and two afternoons a week, being visited by between 15 and 20 children a time. Children over eight regard occupational therapy as rather babyish, and prefer to read. Besides games, there are two cassette tape recorders, and a gramophone with eight sets of headphones. Tapes (cassettes) can be lent out for the ward recorders on request. There is a film once a week for the younger children and fortnightly for the older ones: about 40 children attend each show. There is room for six beds in the library during films. The most popular books are picture books; there is no limit to the number that can be borrowed. More staff are required if the library is to increase the frequency of ward rounds, start group activities (hobbies groups), and occupy the 'healthy' patients.

MEDICAL RECORDS

See also Abstract Nos. 192, 193, 199, 292

220. VICKERS, H. E., INMAN, F. R. and ARMSTRONG, G. **An inter-hospital comparison of a computerised patient information system which uses a regional computer.** *Hospital and Health Services Review*, London, 1975, Dec., vol. 71, no. 12, pp. 422-424.

This paper describes the introduction of a computerized in-patient information

system in Walton Hospital and Fazakerley Hospital. At the time of a patient's admission, a five-part set is prepared on an automatic typewriter: HMRI admission form for the case notes; nursing report form for ward use; discharge/transfer slip, which nursing staff complete to notify the medical records department of any patient movements; Hospital Activity Analysis admission coding slip; and admission index card for medical records department's alphabetical patient index. The paper tape produced is fed back into the automatic typewriter to type the patient details onto a metal foil and a continuous paper tape is used for transmission to the Regional Computer Centre. An abbreviated version of the tape is used as the basis for the laboratory computer reporting system. Each evening after processing, the centre transmits the information onto three-part ward documentation sets via the hospital terminals: ward bed state listing patients in alphabetical order; patient condition sheet for completion by nursing staff for the use of the patient enquiry section; and meal requisition sheet. New sets are issued daily. The daily, weekly and monthly printouts are listed. Progress on the system at each hospital is outlined. An outline system flowchart is included.

HOSPITAL STATISTICS

See Abstract No. 281

FINANCE AND ACCOUNTING

FINANCE

221. PHILLIPS, D. F. **Alternative financing methods for long-term facilities.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 73-76.

In recent years the traditional methods of funding hospitals in the United States, through government aid and philanthropy, have not managed to keep abreast with the rising demand for capital. Increasingly hospitals have turned towards obtaining funds through debt-financing and tax-exempt revenue bonds. Alternative methods of debt financing are discussed. Government loan schemes are also assessed. With the wide variety of alternatives available for capital financing of health facilities a thorough examination must be made of all the prospects before decisions are made. There is no perfect method of financing long-stay care facilities; the best alternative will depend upon the nature of each institution and its needs in combination with the current market conditions.

SUPPLIES AND STORES

SUPPLIES

222. HOUSLEY, C. E. **The making of the materiel manager.** *Dimensions in Health Service*, Toronto, 1975, Oct., vol. 52, no. 10, pp. 55-57.

There are three critical and distinct areas of interest for today's hospitals: manpower management, money management and materials management. Hospitals should give

more attention to this last-named ever-growing area of concern. The materials manager not only handles and controls materials, but manages people, systems, money, property, negotiations and materials and is a thinker, planner, controller, organizer, director and co-ordinator. The post is not just a line responsibility, but also in a staff or advisory relationship within the hospital organization. There is also an administrative perspective in this position. Some aspects of a total materials management programme are discussed.

CATERING, DIETETICS, KITCHENS

HOSPITAL CATERING

223. RONE, D. and FRAKES, E. M. **Implementing the metric system in hospital food preparation.** *Journal of the American Dietetic Association*, Chicago, 1975, Oct., vol. 67, no. 4, pp. 361-363.

The United States is the last major country to adopt the metric system as its primary form of measurement. Many of the activities related to hospital care have already been converted to the metric system. The Department of Dietetics and Nutrition, University of Kansas Medical Center, began a long-term plan to convert food to the metric system in 1968. Three phases were used: (i) mathematical computation to convert the weights and measures; (ii) conversion of equipment used for weighing and measuring; and (iii) training of staff in the use of the converted recipes and equipment.

224. WOODWARD, T. W. **Group purchasing means dietary economy.** *Dimensions in Health Service*, Toronto, 1975, Oct., vol. 52, no. 10, pp. 61-62.

Hospitals in Toronto have co-ordinated their food purchasing programmes through a group purchasing scheme, Hospital Purchasing Incorporated (HPI). HPI is a non-profit corporation operated as a shared service by 39 member and associate member institutions. All purchasing activities are under the guidance of working committees, which are composed of appropriate department heads from the member institutions. The dietary committee is composed of 11 dietitians and catering managers. The Committee has developed four group purchasing systems to meet market conditions for various foods: annual, monthly, weekly, and direct to hospital. The systems are managed by a group co-ordinator on the staff of HPI; his duties are outlined.

DIETETICS IN THE HOSPITAL

225. KURTZ, C. **Patient nutritional care: a dilemma for the hospital nurse.** *Journal of the American Dietetic Association*, Chicago, 1975, Oct., vol. 67, no. 4, pp. 367-369.

Two questionnaires were given to staff nurses and administrative nurses at the 275-bed Indiana University Hospital in 1974, to determine the extent that the nursing staff concur with the objectives of the joint committee of the National League for

Nursing and the American Dietetic Association published in 1964. The findings showed differences between the practice and expectations of the nursing staff regarding: (i) encouraging, reinforcing and selecting foods for the patient; (ii) patient nutritional teaching; and (iii) referring patients with dietary problems to local community groups. In conclusion the roles of the nurse and therapeutic dietitian in nutritional care need to be clarified, and more in-depth studies are necessary to determine the quantity and quality of nutrition education needed for nurses.

HYGIENE IN THE HOSPITAL KITCHEN

226. RINKE, W.-J., BROWN, N. E. and MCKINLEY, M. M. **Two methods for instructing personnel about foodservice sanitation.** *Journal of the American Dietetic Association*, Chicago, 1975, Oct., vol. 67, no. 4, pp. 364-367.

There is a great need for trained workers in the food industry; the need is emphasized by the scarcity of qualified staff, low productivity, high turnover of staff and the unsatisfactory quality of products and services. To remedy this need, short inexpensive training programmes must be developed. The merits of self-instruction versus group instruction have been investigated and outcomes of the study applied. The objectives of this study were: (i) to develop a short training programme on selected aspects of food hygiene for kitchen staff; (ii) to measure the effectiveness of the programme; (iii) to compare two methods of teaching, using teachers and tapes; (iv) to assess the gain in knowledge; and (v) to relate the instruction to the work carried out by the trainees. Two groups of trainees were assessed and the findings evaluated.

HOSPITAL DOMESTIC MANAGEMENT

227. WILLIAMS, C. **Quality control upgrades performance.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 75-76, 78.

A simple quality control system for housekeeping has been devised at Hollywood Presbyterian Medical Center, Los Angeles. The first step was to define the requirements —what was to be cleaned and to what extent. This was done by means of an inspection by the executive housekeeper and a management analyst. Each element was listed together with the level of cleanliness and the result was distributed to all domestic staff. An inspection check sheet was designed with blocks for checking the quality of performance. The hospital was divided into three areas and a supervisor to undertake the inspections was assigned to each. A fourth supervisor was responsible for all areas during the night shift. Random spot checks are made by the executive housekeeper. A simple quality control sampling plan for determining the frequency of inspections was devised. Housekeeping quality is reported to management each week on a progressive graph. With each element and its cleaning requirement specified it is fairly easy to establish estimated cleaning times for staffing and labour standards. The system is easy to implement and maintain and it has improved the quality of domestic work. Figures in the text show the inspection check sheet, the sampling plan and the quality level graph.

HYGIENE IN THE HOSPITAL

HOSPITAL INFECTIONS

See also Abstract Nos. 191, 232

228. FARAONE, P. and BOTTELLI, G. La frequenza degli stafilococchi in generale e di quelli coagulasi positivi in particolare, nell'aria e nei portatori di un ambiente ospedaliero. **[The frequency of staphylococci in general and of the coagulase positive type in particular in the air and carriers in a hospital environment.]** *Annali Sclavo*, Siena, 1975, Jan./Feb., vol. 17, no. 1, pp. 55-73; summaries in English and French pp. 72-73.

A review of the relevant literature is followed by an account of the authors' investigations of contamination of the atmosphere and instruments in a hospital as a possible source of infection during orthopaedic surgery. Coagulase-positive staphylococci were found in nasal and/or throat swabs from up to 39.7 per cent of the staff and 11.4 per cent of patients, and coagulase-negative staphylococci from up to 24.3 per cent of staff and 11.4 of patients at various times during the period of investigation. The number of bacteria in the atmosphere of the operating theatre, washrooms, corridors, and sterilizing rooms was studied while the theatre was empty (at night), when an operation had just begun, and when surgery was in progress. The number of bacteria in the theatre was lowest at night and highest at the start of an operation, depending both quantitatively and qualitatively on the amount of human activity. Two colonies of coagulase-positive staphylococci were found on the handle of a scalpel which had hardly been used. Preventive measures outlined include: reduction to a minimum of human activity in the operating suite; avoidance of movement of groups of people in the corridors; avoidance of unnecessary opening of doors and windows; and the identification of species of bacteria present in the atmosphere.

229. BRAGA, A., ROSSI, A. and GIRANZANI, F. Studio epidemiologico e batteriologico di un episodio di gastro-enterite da "*Escherichia coli*" 0111:B4 occorso in ambiente ospedaliero. **[Epidemiological and bacteriological study of a hospital outbreak of gastroenteritis caused by *Escherichia coli* 0111:B4.]** *Annali Sclavo*, Siena, 1975, Jan./Feb., vol. 17, no. 1, pp. 84-101; summaries in English and French pp. 99-100.

A series of 40 infants suffering from gastro-enteritis due to *Escherichia coli* 0111:B4 was treated at Legnano General Hospital between February and September 1973. Seven infants were ill on admission, but 33 contracted the infection during their stay in hospital. The majority (77.5 per cent) were less than six months old. The clinical symptoms, of which weight loss was the most significant, are described. Bacteriological studies were done in all cases and quantitative studies in nine patients showed that high levels of *E. coli* 0111:B4 persisted two to eight days after initiation of antibiotic therapy. Only colimycin, gentamycin, and trimethoprimsulphamethoxazole were effective against this strain. The paper includes graphs showing the correlation between bacteriological and clinical findings and a table detailing serum antibody titres in these nine patients.

230. CABRERA, H. A. and DRAKE, M. A. **An epidemic in a coronary care unit caused by Pseudomonas species.** *American Journal of Clinical Pathology*, Philadelphia, 1975, Nov., vol. 64, no. 5, pp. 700-704.

Five patients in a coronary care unit were involved in an epidemic caused by a non-fermenting Gram-negative bacillus, presumptively identified by the laboratory as *Pseudomonas cepacia*. All medications administered intravenously to these patients were cultured. Because morphine was the only such medication common to the treatment of all the patients involved, a vial used in the unit at that time was cultured, as were two previously-entered vials of saline solution and several sterile vials of distilled water used in the preparation of injectable solutions. The *Ps. cepacia* organism was recovered from one of the vials of saline solution. The epidemic ended as soon as the practice of re-entering the vials of sterile saline solution was discontinued.

231. FERRUCCI, M. and others. Infezione crociata da "*Salmonella Thompson*" in ambiente nosocomiale pediatrico. **[Cross infection with *Salmonella thompson* in a children's department.]** *Annali Sclavo*, Siena, 1975, Jan./Feb., vol. 17, no. 1, pp. 75-83; summaries in English and French pp. 81-82.

A total of 2,161 rectal swabs from children in four different paediatric units in Ferrara was submitted to a series of tests for biochemical identification over a six-month period. Salmonella was isolated in 85 samples, or 3.93 per cent, ranging from 1.05 per cent in one unit to 5.56 per cent in another. Cross-infection was discovered in one unit—13 patients were known to have contracted the infection during their stay in hospital. Samples from staff in this unit were investigated and *Salmonella thompson* was isolated from two nurses. It was also isolated from a washroom floor on one occasion. A programme of systematic investigation of patients and staff should discover chronic carriers of Salmonella and prevent cross-infection in hospital.

SOURCES OF INFECTION

See also Abstract No. 228

232. LIDWELL, O. M. and others. **Airborne infection in a fully air-conditioned hospital. IV. Airborne dispersal of *Staphylococcus aureus* and its nasal acquisition by patients.** *Journal of Hygiene*, London, 1975, Dec., vol. 75, no. 3, pp. 445-474.

Earlier papers in this series [see *Hospital Abstracts*, Vol. 15, Abstract 1451] showed that the ventilation system in a fully air-conditioned hospital is highly effective in preventing the direct transfer of airborne particles from one patient room to another. This paper examines the spread of *Staphylococcus aureus* within the ward areas, as reflected in the rates of colonization of patients with new strains. The numbers of *St. aureus* found in the air of a given room that appeared to have originated from patient carriers in other rooms were many times greater than could be accounted for by direct airborne transfer. It seems probable on the basis of this and other studies that this excess transfer occurs indirectly, through dispersal from the clothing of the nursing and medical staff into the air of another room of strains with which their

outer clothes have become contaminated while dealing with patients. Reduction in airborne transfer of micro-organisms from one room to another, whether by ventilation or other means, can only be of clinical advantage if transfer by other routes is, or can be made, less than that by the direct airborne route.

233. MOUZAS, G. L. and YEADON, A. **Does the choice of suture material affect the incidence of wound infection? A comparison of Dexon [polyglycolic acid] sutures with other commonly used sutures in an accident and emergency department.** *British Journal of Surgery*, Bristol, 1975, Dec., vol. 62, no. 12, pp. 952-955.

One hundred and four patients with superficial lacerations were sutured with either Dexon (polyglycolic acid), silk, polyethylene or nylon sutures. The incidence of post-operative tissue reaction and wound infection was compared. There were few complications and these occurred with almost the same frequency in each suture group, although there were slightly more cases of infection in the patients who were sutured with silk. Dexon was seen to possess certain advantages in that it caused as little tissue reaction as the other sutures but did not have to be removed subsequently. This could clearly be of benefit to the patients and hospital staff alike.

234. DASCHNER, F. and SENSKA-EURINGER, C. Kontaminierte infusionen als ursache nosokomialer serratia-marcescens-sepsis bei kindern. **[Contaminated infusions as a source of hospital-acquired *Serratia marcescens* septicaemia in children.]** *Deutsche medizinische Wochenschrift*, Stuttgart, 1975, Nov. 7, vol. 100, no. 45, pp. 2324-2328; summary in English, p. 2324.

At the University Children's Hospital, Munich, 25 cases of *Serratia marcescens* infection occurred within one year, predominantly in newborn babies and infants. Almost all of the children were seriously ill from an underlying illness or had been operated on; two-thirds had received antibiotics before infection, but they were ineffective. Of a total of nine antibiotics tested against 51 *Serratia marcescens* strains, nalidixic acid (99 per cent sensitivity) and amikacin (100 per cent) proved to be the most effective. Contaminated infusions were the main source of infection. Intensive hygienic measures soon ended the outbreak. [This abstract has been prepared from an English summary of the paper.]

PREVENTION AND CONTROL

See also Abstract No. 191

235. MCGRAY, R. J. and DINEEN, P. **Hospital testing of products and procedures for inanimate environmental decontamination.** *Hospital Topics*, Neptune, N.J., 1975, Sept./Oct., vol. 53, no. 5, pp. 15, 17, 39, 40, 42-46.

The first part of this paper discusses the rationale for the testing of hospital disinfectants. The second part describes a study of the effects of various environmental challenges on product performance and decontamination procedures; the methods used are suitable for every hospital bacteriology laboratory. The results are presented in 11 tables.

HYGIENE IN THE OPERATING THEATRE

See also Abstract No. 233

236. QUESNEL, L. B. **The efficiency of surgical masks of varying design and composition.** *British Journal of Surgery*, Bristol, 1975, Dec., vol. 62, no. 12, pp. 936-940.

Five different types of surgical mask of varying design and composition of natural and synthetic fibres were tested for their efficiency in vivo by means of a special test chamber. Contaminated particles escaping through or around the mask during speech by the wearer could be collected and sized. Analysis of the data showed that the gross efficiency of all the masks was high, but that some masks were distinctly better at small particle 'filtration' than others. There was a significant difference in efficiency between the best and worst masks. The best masks contained more fabric, were softer and were pleated, while the worst were stiffer, smaller and not pleated. Reusable cotton fabric masks were as effective as synthetic fabric masks when made to a good design.

STERILIZATION

See also Abstract No. 268

237. WEYMES, C. **Use of low temperature steam in the sterilisation of nonporous loads: at subatmospheric pressure and with low concentrations of formaldehyde.** *Hospital Engineering*, Stevenage, 1975, Dec., vol. 29, pp. 22-23.

The sterilization of heat-sensitive non-disposable items presents great problems in hospitals. The use of steam at subatmospheric pressure with formaldehyde to sterilize items at between 70° to 80°C was developed to overcome these problems. This method is currently used in a few centres in the United Kingdom but has not received the recognition and consequent development it deserves. The standard cycle used is outlined. It was felt that this cycle was too long, the temperature was a little high and the concentration of formaldehyde was too high. This paper describes studies which covered 1,000 cycles restricted to the sterilization of heat-sensitive non-porous loads. The investigation showed that: (i) 65°C was as effective a temperature as 70°C or higher; (ii) the holding of the 'sterilizing' period was valueless, sterilization occurring during the 'pulsing' period; (iii) the amount of formaldehyde required varied according to the size and porosity of the load and the method of introduction; and (iv) load penetration can be monitored using a standard or modified helix. A new recommended cycle based on these findings is presented.

238. CRAIG, D. B. and others. **Disinfection of anaesthesia equipment by a mechanized pasteurization method.** *Canadian Anaesthetists' Society Journal*, Toronto, 1975, March, vol. 22, no. 2, pp. 219-223.

A method for disinfecting and mechanically processing detachable components of anaesthetic breathing circuits is examined. Using a technique of artificial contamination

of anaesthetic breathing tubes the bacteriological efficiency of hot water pasteurization was assessed. The organisms tested were *Pseudomonas aeruginosa*, *Klebsiella pneumoniae*, *Staphylococcus aureus* and *Streptococcus faecalis*. The contamination before pasteurization was greater than 10^8 organisms/ml., but after the process 88 of the 96 tubes tested showed no growth rate, whilst in the remaining eight it was less than one organism/40 ml. Equipment is now automatically washed in a clothes washing machine and disinfected by pasteurization. This provides a relatively simple and reliable method of disinfecting certain types of anaesthetic equipment in the absence of more effective methods.

239. MITCHELL, J. P. and ALDER, V. G. **The disinfection of urological endoscopes.** *British Journal of Urology*, London, 1975, Oct., vol. 47, no. 5, pp. 571-576.

The object of this paper is to review the current methods of disinfecting and sterilizing endoscopes, with particular reference to developments at the Bristol Royal Infirmary. There are three principal methods of disinfection in use: (i) immersion in a chemical fluid; (ii) enclosure in a chamber containing a disinfecting vapour; and (iii) a form of moist heat process at temperatures of less than 100°C, by pasteurization or low-pressure steam. All methods are discussed and their relative merits evaluated. To create a system of disinfection whereby the instruments are pre-packaged and stored in a sterile state, a prototype transportable low-pressure steam autoclave was constructed in 1966, with the aid of a grant from the Department of Health and Social Security. The prototype has been in constant use and the endoscopes show no evidence of damage directly attributable to the low-pressure steam. The advantages of a small autoclave lie in speed of operation, transportability, economy in running costs, and reduction in the handling of endoscopes. The effectiveness of the system has been thoroughly tested and used over the past eight years at the Bristol Royal Infirmary.

AIR HYGIENE

240. YOSHIZAWA, S. and others. **Researches** [sic] **on air cleaning design for hospitals [centering on one measurement].** *Transactions SHASE Japan*, Tokyo, 1974, vol. 12, pp. 49-66.

As an approach to air cleaning design, the degree of cleanliness of the air in a Japanese hospital considered to have a high standard of air-conditioning was measured. The quantities of dust and bacteria were examined and studied from various aspects: (i) the number of bacteria and particulate in the existing air conditions; (ii) the quantities of bacteria and particulate generated under specified circumstances; (iii) the calculation of Stork's diameter of bacteria; and (iv) the correlation of various measured values from the stand-point of contamination control. The results established that the degree of cleanliness of the air at every measuring spot in the hospital was better than any other examples measured in office buildings and other hospitals. When the number of people per unit area exceeds a certain limit, the number of airborne bacteria increases correspondingly. Plans of the hospital and tables of results are included.

SAFETY MEASURES

ACCIDENTS, GENERALLY

See Abstract No. 180

ELECTRICAL ACCIDENTS

241. FISCHMANN, G. S., YOUNG, S. R. and GUTTMAN, E. S. **Medical staff, department heads team up for safety's sake.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 89, 92-93.

In 1966 when a new coronary care unit and intensive care unit were being planned for St. Joseph Mercy Hospital, Ann Arbor, Mich., an advisory committee on medical electronics was formed. This consisted of five doctors and one administrator and the aim was to select equipment for the new units, to collect information on all electronic equipment in use at the hospital, and to disseminate information on medico-electronic problems to medical and other staff. After two years it was found that the committee was not being consulted as much as it should and representatives from the engineering department, the nursing service and the materials management department were added. Since then it has become very much concerned with electrical safety and a comprehensive safety programme has been introduced. This includes: in-service training in electrical safety for all staff; modification of all electrical outlets to take earthed three-prong wall plugs and the fitting of all equipment with three-prong plugs and three-wire leads; preventive maintenance checks of all areas every 90 to 120 days; circulation of a safety checklist to all nursing units every four months; no medical equipment may be bought or brought into the hospital without first being evaluated; and microshock detecting devices have been provided in critical areas. Guidelines for a committee are set out based on experience at the hospital.

FIRES AND FIRE PREVENTION

242. Automatische brandsignalering onmisbaar bij wooncentra voor lichamelijk gehandicapten: rookdetectoren basis van brandpreventie bij 'Nieuw Unicum'. **[Automatic fire alarms essential in accommodation centres for the physically handicapped: smoke detectors are the basis for fire prevention at 'Nieuw Unicum'.]** *Technische Gids voor Ziekenhuis en Instelling*, Amsterdam, 1975, Oct. 28, vol. 44, no. 1087, pp. 822-825.

A fire, extinguished too late because of human error, showed up the unsatisfactory state of the existing fire alarm system at 'Nieuw Unicum'. A working group was appointed to study the installation of a fully automatic system. In its report the group recommends the installation of two per cent sensitivity optical smoke detectors connected to a central alarm which automatically alerts: the fire brigade; the team of fire fighters (14 staff); the siren; the alarm in staff residences; hooters or bells on the departments; panels on wards to read the site of the fire; indicators on corridors to click or light up when the fire is in the adjacent room; fire doors to close; the

nurses stand-by team; and the ventilation system cut-out. Recommendations on the special problems of a long cellar corridor are given, such as provision of fire hoses, divisions into compartments, covering with fire-resisting materials, use of reinforced glass, valves in ventilation shafts, and automatic door closers. Details are given of the testing of smoke detectors. There were 33 tests over three days and the optical type was chosen in preference to the ionization detector, as it proved more suitable in cases of smouldering fires. Three photographs and a plan of the institution are included.

243. AMERICAN HOSPITAL ASSOCIATION. **Fire safety training in health care institutions.** Chicago, American Hospital Association, 1975, vi, 51pp. $2.25

The focus of this booklet is on the training of hospital staff in order to promote and maintain fire safety. It is in three parts: (i) organization; (ii) setting up a procedure and putting it in writing; and (iii) training and fire drills. A sample fire hazard inspection report and details of the characteristics of various fire extinguishers are included as appendices.

PLANNING FOR MASS EMERGENCIES

244. SILLAR, W. **Planning for disasters.** *Long Range Planning*, Oxford, 1975, Oct., vol. 8, no. 5, pp. 2-7.

Various approaches to the problems of dealing with mass emergencies and national disasters are given. Although in Britain the risk of large-scale natural disasters is less than in many countries, there is an increasing risk of accidents produced as a result of technological advances in industry and political unrest. The role of the medical, ambulance and police services and armed forces, together with the shortcomings, is analysed. Methods of preparing for emergencies in America, Sweden, France, Ulster and the North Sea are compared. There is no national organization concerned with overall planning for disasters in Britain and a shortage of authoritative up-to-date information. There is a need to improve the co-ordination of the community's response to danger; techniques of communication are often inadequate and the importance of rehearsal needs to be stressed.

THE PATIENT

ADMISSION AND RECEPTION

See Abstract No. 274

WELFARE OF THE PATIENT

See also Abstract Nos. 275, 282, 302

245. DANIEL, D. **What the patient thinks.** *Nursing Mirror*, Sutton, Surrey, 1975, Dec. 4, vol. 141, no. 23, p. 73.

A study of patient care in hospitals and conversations with discharged patients in their homes revealed that many were keen to offer suggestions for improvements of

the service. Two subjects were regularly raised: lack of communication and ward routine. Many patients knew very little about their body and were content to accept the treatment they received. Several questioned routine jobs performed by the hospital and early discharges from hospital. With the full support of the district nursing officers, and co-operation of the consultants and nurses the prospect for patients should be improved in the future.

THE GENERAL PRACTITIONER AND HIS PATIENTS

See Abstract No. 254

TRANSPORT OF PATIENTS

See also Abstract No. 294

246. WADDELL, G. **Moving the critically ill.** *Nursing Times*, London, 1975, Dec. 4, vol. 71, no. 49, pp. 1937-1939.

Critically ill patients have been shown to suffer major cardio-respiratory collapse or death as a result of being moved within the same hospital. Studies of the movement of such patients are described and the dangers analysed. The importance of improving transport systems and continuing therapy must be emphasized to all nursing staff in order to prevent such accidents.

247. HOFGAARD, K. C. Ambulansetjenesten fra en administrativ synsvinkel—ambulansetjeneste og standardisering. **[Ambulance services from an administrative point of view—the ambulance service and standardization.]** *Norsk Sykehustidende*, Oslo, 1975, Oct., vol. 48, no. 10, pp. 201-202.

Unlike the situation in Sweden, Norwegian ambulance vehicles and equipment are not standardized, which can be a drawback in large-scale emergencies. Most counties have decided in favour of the International Standard Organization standards, but many with West German equipment (e.g. Mercedes-Benz ambulances) are still forced to use the West German standards. Standardization has advantages of: ease of training and operation; economy of repairs, maintenance and spare parts holdings; reduced waiting times (the ambulance driver takes an empty stretcher at the hospital instead of having to wait for his own); and economy in purchasing, e.g. a fleet of ambulances instead of one-off jobs for the individual ambulance stations.

HOSPITAL CARE

See also Abstract Nos. 245, 275, 283, 291

248. LOWTHIAN, P. T. **Pressure sores. 1. Practical prophylaxis.** *Modern Geriatrics*, London, 1975, Nov., vol. 5, no. 11, pp. 25-30.

Skilled nursing care is accepted as effective in preventing pressure sores, but the shortage of such care and the increasing number of elderly patients likely to suffer

from sores has encouraged the development of a large number of prophylactic methods. Most new methods rely on special equipment, of which a careful evaluation must be made. Some of the methods most suited to elderly patients are assessed. Methods for supporting patients with bed sores include: (i) fluids, e.g. water immersion beds, air fluidised beds and high density fluid (mud) beds; (ii) viscous particulates, e.g. feathers, sawdust; (iii) gels and gel cushions; and (iv) foams, e.g. rubber, polyether, plastic. Active prevention of bed sores is carried out by regular turning, which may be accomplished by intricate turning beds and by the use of alternating pressure pads. Problems of posture prevent the patient sitting up for long periods; debilitated patients tend to slide forward concentrating much of their weight over the sacrum and for them a 'gatched' bed would be of help. The surface effects of friction are assessed and suggestions made for improving general nursing care.

249. KÖNNEN, E. E. De organisatiekenmerken van teamverpleging. **[The organizational characteristics of team nursing.]** *Ziekenhuis*, Utrecht, 1975, Oct. 1, vol. 5, no. 19, pp. 464-467.

The author attempts to find a simple definition which distinguishes clearly between team nursing and other forms of organization. In comparing two similar hospital departments it was found that the one where the nursing care was split into the smaller units was the more effective. This showed that there is a need for a narrower conception than team nursing, viz. unit nursing, which is the division of a department into small groups of patients which are entirely cared for by a constant group of nursing staff. This should include the necessity of work consultation under a leader within a unit and the units would co-ordinate under the leadership of the departmental head. Little research has yet been carried out into the optimal size of the nursing unit and the effectiveness of separate forms of unit nursing. The author finally defines team nursing as a combination of unit nursing with work consultation per unit. A plan comparing team nursing and unit nursing is included.

250. RUBIN, I. M., PLOVNICK, M. S. and FRY, R. E. **Improving the coordination of care: a program for health team development.** Cambridge, Mass., Ballinger, 1975, xii, 279pp. £7.35

The materials contained in this workbook are designed to help health care staff to improve their teamwork and provide better co-ordination in their efforts to deliver care. It consists of an introduction, guidelines for starting health team development, guidelines for users, seven core modules, each of which discusses one of the more frequently raised issues, and six optional modules.

251. GOSFIELD, A. **PSROs: the law and the health consumer.** Cambridge, Mass., Ballinger, 1975, xiv, 264pp. £8.00

This book explains the Professional Standards Review Organization (PSRO) programme and contains what is hoped are practical recommendations on policies and actions which would benefit the patients who are only one group of participants in the health care delivery system. Following an introduction there are chapters on: norms; PSROs and institutional review; PSROs and paying agents; hearings and review; accountability; and sanctions and enforcement.

252. SANAZARO, P. J. **Private Initiative in PSRO.** *New England Journal of Medicine*, Boston, Mass., 1975, Nov. 13, vol. 293, no. 20, pp. 1023-1028.

Private Initiative in PSRO (PI) is a privately financed joint effort by five major professional organizations to influence the implementation of PSRO in the public interest. The organizations involved are American Association of Foundations for Medical Care, American College of Physicians, American Hospital Association, American Society of Internal Medicine and American Medical Association. Funds have been provided by the W. K. Kellogg Foundation. Working with five PSROs, PI is testing a form of concurrent quality assurance and its effect on the immediate outcomes of hospital care. The project also promotes and evaluates participation in local PSROs by representatives of the general public. The operating costs of PSROs and their impact on hospital use and reimbursements by Medicare and Medicaid are being prospectively studied. A central concern of PI is the growing encroachment by the central administration of PSRO on private medicine's traditional responsibility for assuring the quality of medical care. PI seeks improved means of rendering a satisfactory public accounting in quality assurance, as an alternative to federal regulation of this fundamental professional function.

253. MILLER, M. H. **PSROs—boon or bust for nursing?** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 81-82, 84.

Professional Standard Review Organizations (PSROs) have been introduced by law in the United States. They are mainly concerned with the care provided by doctors but other health practitioners such as nurses are expected to help to develop criteria and standards for care provided jointly and to review the care provided by others in their professions. The existing standards of nursing practice must be endorsed by the PSROs which are physician-dominated, yet doctors need not consult with any other professional group in establishing their standards. It is difficult to see how nurses will go about getting physician-controlled PSROs to allow nursing standards that doctors believe to be unacceptable. There has recently been emphasis on preparing nurses for expanded roles but some doctors feel threatened by this and PSROs may not allow nurse practitioners and nurse clinicians to function at the level for which they are prepared. It is felt that the law will restrict nursing practice in the areas of independence and decision making. The exact status of nursing in PSROs is as yet unknown but if it seems unsatisfactory nurses as the largest group of health professionals might be able to exert pressure to have the law amended.

DISCHARGE OF PATIENTS

See also Abstract No. 298

254. TULLOCH, A. J. and others. **Hospital discharge reports: content and design.** *British Medical Journal*, London, 1975, Nov. 22, vol. iv, pp. 443-446.

The value of accurate, complete and well-designed discharge reports is often underestimated. The optimum layout and content of the reports and notes on their importance are detailed. A selection of 546 reports from hospitals in Aylesbury, Amersham, Banbury, Oxford and High Wycombe were reviewed for the availability

and accessibility of important information. Several items could have been recorded better, including the name of the hospital, the specialty (or department) concerned and the name of the consultant in charge of the case. Drug reactions were reported in only two per cent of initial summaries and 10 per cent of final reports; information about treatment on discharge was inadequate. The use of obscure abbreviations was widespread. There is much room for improvement in the case of access to important information, especially the diagnostic assessment, and the time taken for final reports to reach the general practitioner.

HOME CARE, AFTER-CARE

See also Abstract Nos. 272, 284

255. ROBERTS, I. **Discharged from hospital.** (Study of Nursing Care Project Reports, Series 2, Number 6) London, Royal College of Nursing, 1975, 157pp.

This study attempts to assess the effectiveness of the care that patients receive following a stay in hospital. It is based on interviews with 164 patients within one week of discharge from hospital and a survey of the 16 ward sisters involved. The patients were asked about their ability to perform a number of ordinary daily actitivities, what help they felt they needed and who provided this. The ward sisters were asked to rank matters considered of importance in the care of patients. It is apparent from the studies undertaken so far that the organization of after-care is not always successful in eliminating what often seems to be avoidable hardship.

SPECIAL DEPARTMENTS

ADMISSION UNITS

See Abstract No. 274

OPERATING SUITES

See also Abstract No. 228

256. WHYTE, W., SHAW, B. H. and BAILEY, P. V. **An assessment of partial walls for a down-flow laminar-flow system.** *Journal of the Society of Environmental Engineers*, London, 1975, Sept., vol. 14-3, no. 66, pp. 13-17.

Laminar-flow systems are normally provided with walls to prevent mixing of the clean unidirectional air with room air: this barrier restricts access and communication. This paper describes studies to evaluate the necessity for complete walls and the comparative advantage of a partial wall. The studies were carried out: (i) using a one-tenth scale water model with the same dynamic characteristics as a laminar-flow operating theatre; (ii) at the London Hospital, where there is a permanently installed laminar-flow operating theatre with partial walls [see also *Hospital Abstracts*, Vol. 14,

Abstract 1622]; and (iii) at Gartnavel Hospital, Glasgow, where the authors' latest experimental operating theatre system is installed. The London Hospital tests showed clearly the advantage of partial walls as compared with no walls at all. The Gartnavel Hospitals tests were carried out on a system which has three full walls and a fourth side with a plastic curtain which can be raised and lowered: the advantages of this system were demonstrated.

ANAESTHESIA

See also Abstract Nos. 238, 289

257. McIntyre, J. W. R. **Participation of allied health professionals in the practice of anaesthesia: report of a study.** *Canadian Anaesthetists' Society Journal*, Toronto, 1975, March, vol. 22, no. 2, pp. 232-240.

Four recently qualified nurses received three months' training in the supervision of healthy adult surgical patients in whom surgical anaesthesia had been induced by specialist physician anaesthetists. The training period was followed by a three-month evaluation period. The object of the project was to discover whether nurses could be trained in three months to look after certain anaesthetized patients without difficulty. It was emphasized that adequate practical instruction rather than theoretical knowledge is essential for staff taking on this work. The conclusions from such a small sample revealed that each of the nurses found the work in its final form unrewarding, but were capable of looking after patients safely.

PHARMACY

See also Abstract No. 269

258. Brooks, G. E. and Knapp, D. A. **Economics of institutional pharmacy services under national health insurance in Australia.** *American Journal of Hospital Pharmacy*, Washington, 1975, Oct., vol. 32, no. 10, pp. 1018-1022.

The development and the effect of the national health scheme on institutional pharmaceutical services in Australia are discussed. For over 30 years Australian hospital pharmacists have practised under the auspices of direct federal financing. The expenditure of public money has provided two questions: how much money is to be allocated, and how should the funds be allocated? The present system of reimbursement provides little or no incentive to economize on drug purchases or to improve drug use as it uses a flat percentage reimbursement in excess of 100 per cent. The same formula is applied to all pharmacists regardless of the type or quality of service. Reimbursement to hospitals is less than that given to community pharmacies for the same services. Methods of improving the present system of health insurance benefits are suggested, together with the establishment of a pharmaceutical commission to establish professional standards review organizations as in the United States, and set up new accreditation and reimbursement schemes, together with proposals for improving the Health Insurance Act. The relevance of the Australian experience to current developments in public financing in the United States is emphasized.

259. DiPirro, M. N., Kelly, W. N. and Miller, D. E. **Developing a clinically oriented drug information service in a community hospital.** *Hospital Pharmacy*, Philadelphia, 1975, Oct., vol. 10, no. 10, pp. 434, 436-438, 440.

A drug information service was established in September 1972 at Hamot Medical Center, Erie, Penn. The aim was to provide a high quality service with limited capital expenditure and no additional staff. The methods used to acquire resources, train staff and promote the service are described. The activities promoted by the service include drug-oriented product information, providing literature information on the treatment of poisoning, preparing background material for the pharmacy and therapeutics committee, and the preparation of monthly newsletters for doctors and nurses. The procedures for establishing the service are outlined.

260. Medicamentenvoorziening veiliggesteld: TIMED, het Tilburgse systeem voor therapiebewaking. **[Drug supplies made safe: TIMED, the Tilburg drug control system.]** *Instelling-Management*, Den Haag, 1975, Oct., vol. 7, no. 10, pp. 8-11.

The TIMED system, aimed at reducing errors in supplying drugs, is basically the unit dose packaging system with an additional procedure for registration and checking. It is based on: (i) identification of the patient; (ii) identification of the drug; and (iii) the original prescription. The prescription is written on a special form, the upper part of which is passed on for computer processing; the lower part, a self-adhesive strip, is stuck in a patient medicine book. This book, for use at the bedside, carries the patient's identity and has one left hand and thirteen right hand pages for entry of prescriptions and labels of given drugs respectively. In the dispensary, drugs bought in bulk are re-packed by the 'Hassia' packing machine into unit quantities with labels attached giving name of drug, quantity, factory number, packing date, and computer number. After administration of the drug, these labels are entered in the patient's medicine book alongside the prescription and checked by the ward sister. Prescription and labels are fed into a computer which produces a complete picture of the patient's medication, a list of all drugs given, their (in)compatibility, cost, and amount in stock. Nine photographs are included.

261. Kelly, W. N., White, J. A. and Miller, D. E. **Drug usage review in a community hospital.** *American Journal of Hospital Pharmacy*, Washington, 1975, Oct., vol. 32, no. 10, pp. 1014-1017.

Hamot Medical Center, Erie, Pa., has established a drug usage review system to increase the quality of drug therapy and assure the safety of prescribing and administering medications to patients. Every month 10 to 15 medical charts are selected at random from the medical records department for review. The only stipulation is that the patients should not have been discharged more than 60 days previously. The number of charts represents one per cent of the total number produced each month. Those that raise queries regarding treatment and prescriptions are passed on, by a drug information pharmacist, to a doctor and nurse on the drug utilization committee; cases that require closer investigation are referred by them for review by the whole committee. The problems are categorized and the individual prescribers are informed. The continuous review provides an opportunity for all doctors to learn about their

prescribing techniques. During the first two years of the scheme 341 reports were examined, and 62 referred to the committee. The scheme is simple yet highly effective, clarifying various legal aspects of prescribing certain drugs and enforcing changes in prescribing habits.

262. ARRINGTON, D. M., DEREWICZ, H. J. and LAMY, P. P. **A comparison of unit dose for adult and pediatric patients at Johns Hopkins Hospital.** *Hospital Pharmacy*, Philadelphia, 1975, Oct., vol. 10, no. 10, pp. 410, 412-413, 416.

The Johns Hopkins Hospital Department of Pharmacy Services implemented a computer-based unit dose system in May 1970. The system was analysed in 1972. The study revealed that approximately twice as many doses are prepared for and administered to adult patients per day as compared to child patients. Adult patients received a higher percentage of oral solids than paediatric patients, who received a higher number of doses by injection. Approximately 70 per cent of the doses for children required improvised packaging; approximately 50 per cent of the adult patients' doses are administered in oral solid forms (capsules and tablets).

263. SCHNELL, B. R. and others. **Unit-dose in a 183-bed hospital.** *Canadian Journal of Hospital Pharmacy*, Saskatoon, 1975, July/Aug., vol. 28, no. 4, pp. 124-126.

The Canadian Society of Hospital Pharmacists is conducting a study in four Canadian hospitals of the changes which occur when a unit dose drug distribution system is introduced. An earlier paper described the system introduced in the 85-bed St. Elizabeth's Hospital, Humboldt, Sask. [see *Hospital Abstracts*, Vol. 15, Abstract 1019]. This paper deals with that at the 183-bed Central Newfoundland Hospital, Grand Falls. The system is completely manual and of a centralized nature, with some involvement of the pharmacists on the wards as time permits. The capital cost of the system was $8,000, the non-professional staff has been increased from one to two and a half pharmacy technicians and the area of the pharmacy has been increased by 180 sq. feet. Possible future modifications are discussed.

264. DEREWICZ, H. J. and SIMBORG, D. W. **The computer-based unit dose drug distribution system at Johns Hopkins Hospital: second generation.** *Hospital Pharmacy*, Philadelphia, 1975, Oct., vol. 10, no. 10, pp. 417-418, 419-422, 427-430, 433.

The development and operation of a second generation computer-based unit dose drug distribution system at Johns Hopkins Hospital is discussed. Doctors' prescription orders are entered on the computer and the computer prints an envelope with an individual patient's medication order for a given hour. Drugs are inserted in the envelope and the envelopes are delivered immediately before the time the drugs are to be administered. A daily drug profile is produced. The system provides a workable method for presenting drug information and data on individual patients. The system also eliminates the need for decentralized pharmacy staff and consequently greater efficiency can be achieved. Examples of the stationery and printouts used in the system are given.

LABORATORIES

See also Abstract No. 217

265. GRANT, J. and HARRINGTON, J. M. **Vandalism in medical laboratories: report of a survey.** *Laboratory Practice*, London, 1975, Nov., vol. 24, no. 11, pp. 735-736.

Replies to a questionnaire survey of 36 laboratories in England and Wales for the period 1972 to 1974 indicate that theft from laboratories is commonplace and that while thefts tend to occur as isolated incidents, some laboratories are subjected to repeated episodes. Deliberate damage, as opposed to robbery, was experienced in seven laboratories (19 per cent) and appears to be directed either towards the fabric of the laboratory premises or towards sophisticated automated laboratory instruments. The latter seems to be a new and exotic form of vandalism, presupposing a knowledge of instrumentation and an understanding of the possible effects of defective instruments. Details are also given of access to and security of the laboratories.

266. CROCKETT, A. and SMITH, R. L. **Use of on-line computer facilities in a respiratory function laboratory.** *Medical Journal of Australia*, Sydney, 1975, Sept. 20, vol. ii, no. 12, pp. 486-488.

The use of on-line computer facilities by the respiratory function laboratory of the Repatriation General Hospital, Concord, using the central computer of the Australian Department of Repatriation and Compensation, demonstrates how computers can be used to improve patient care. Three pulmonary function tests have been applied to the computer: spirometry, lung volume measurement and gas exchange analysis. The potential error rate in calculation has been greatly reduced. There is no storage of data after the printing of results has taken place. Four separate Cobol programs are used. The introduction of the computer facility has saved time, allowed an increased depth of assessment of the patient and resulted in an increase in the number of patients tested. Suggestions for further development of the computer facilities are discussed.

267. RAYMOND, S. **Physician-oriented data processing.** *Journal of the American Medical Association*, Chicago, 1975, Oct. 6, vol. 234, no. 1, pp. 83-85.

Patient care as a primary objective of the laboratory computer has often been overlooked by those who design the systems and little attention has been paid to the needs of the physician. An informal survey among the staff of a teaching hospital showed that basically they wanted two services from a computer: to order tests and to get reports. This paper examines these two needs and the problems that arise in meeting them and suggests some solutions.

268. GILLESPIE, E. H. and GIBBONS, S. A. **Autoclaves and their dangers and safety in laboratories.** *Journal of Hygiene*, London, 1975, Dec., vol. 75, no. 3, pp. 457-487.

Using a laboratory downward displacement vertical autoclave with the help of thermocouples recorded on a 12-point multichannel strip recorder, the risk of failing to sterilize laboratory discard buckets is demonstrated. The use of proper temperature and time controls can prevent this risk. The use of perforated buckets or wire baskets

facilitates the sterilizing practice. The addition of water to a bucket does not reduce the time of heating up. Sealed bottles of media should not be sterilized in simple downward displacement autoclaves since they have a high internal pressure which can allow them to explode if they are removed too early. Recommendations suggested include: (i) all air must be removed from the load to facilitate obtaining adequate temperatures; (ii) a fully automatic fluid sterilizer should be used for sterilizing fluid media in sealed bottles and all temperatures and time cycles should be controlled by a load temperature simulator to bring down the temperature and the internal pressure to a safe level; (iii) the opening of the sterilizer door or lid should be automatically controlled by the load temperature simulator; and (iv) if bottles are not sealed there is not the same risk of explosion as when sealed bottles are used, but there is always the risk of post-sterilization contamination.

RADIOISOTOPE DEPARTMENT

269. PORTER, W. C., ICE, R. D. and HETZEL, K. R. **Establishment of a nuclear pharmacy.** *American Journal of Hospital Pharmacy*, Washington, 1975, Oct., vol. 32, no. 10, pp. 1023-1027.

The University of Michigan Regional Nuclear Pharmacy is described. The objectives of the pharmacy are service, education and developmental research, and include five areas of activity: (i) radiopharmaceutical formulation and dispensing; (ii) quality control; (iii) inventory control; (iv) research and development of new radiopharmaceuticals; and (v) consultation. The organization, staff and economic considerations, together with the facilities and equipment are described. The legal considerations are analysed.

REHABILITATION

See Abstract No. 276, 277

OCCUPATIONAL THERAPY DEPARTMENT

270. GRAY, J. A. M. **OT students should not start training straight from school.** *British Journal of Occupational Therapy*, London, 1975, Nov., vol. 38, no. 11, pp. 240-241.

Various fields are suggested in which the training of occupational therapists could be improved to give a greater knowledge and readiness to accept responsibility for the patient. A good experience of life is essential coupled with the realization that by the direct contributions of the occupational therapist and by the influence she can exert, many of the problems of disabled people can be expressed. The five areas for concern in disabled patients are: (i) the desire for independence in the home; (ii) low income; (iii) lack of heating and being cold; (iv) isolation; and (v) housing. In order to remedy problems the occupational therapist must learn about: other professional roles, skills and attitudes; the departmentalization of local and central government and how to work the system for the benefit of the patient; and take an anatomy course more oriented to function, not theory.

271. DUNKIN, E. N. **Occupational therapy training in Exeter.** *Health and Social Service Journal*, London, 1975, Dec. 6, vol. 85, no. 4468, p. 2706.

St. Loyé's School of Occupational Therapy, Exeter, follows the syllabus that prepares candidates for the Diploma Examinations of the British Association of Occupational Therapists. The course covers three years divided between tuition in the school and practical experience in a hospital. The courses are described; they are organized so that the student can gain experience in instructing others. The yearly intake of the school is 80 to 85 students, and in terms of final examination success there is a 98 per cent pass rate, with the two per cent successfully retaking the examinations six months later. The school is not based on a hospital and consequently a large amount of experience and appreciation of the problems of the physically handicapped have to be simulated by the students.

DEPARTMENTS FOR SPECIAL THERAPY

272. MERLIN, D. **Home care project for indigent allows dignified care, cuts costs.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 77-78.

The aim of the home oxygen project for indigent patients at Temple University Hospital, Philadelphia, is to meet the needs of a special group of patients, whilst promoting the best use of beds. Fourteen patients have so far taken up the scheme. The funds for the payment for oxygen come from the social services. All the patients covered by the project receive follow-up treatment from a doctor at Temple University Hospital, or from a community doctor, and social workers consider the situation from the viewpoints of emotional support, adjustment to illness or disability, financial problems, family problems and the provision of services. The results show that the home care scheme saved the hospital $615,916 for the 14 patients in 1974-75. The patients received high quality care in their homes and in the hospital, and have retained their independence. A saving of 99 per cent of the potential cost of in-patient care was achieved.

INTENSIVE CARE UNITS

See Abstract No. 230

SPECIAL HOSPITALS AND UNITS

OUT-PATIENT

See Abstract Nos. 172, 286-289, 292

CASUALTY AND ACCIDENT

See also Abstract No. 233

273. HANNAN, E. **Planning an emergency department holding unit.** *Socio-Economic Planning Sciences*, Oxford, 1975, Oct., vol. 9, no. 5, pp. 179-188.

Ideally an emergency department should have a room (or rooms) for observing

patients and performing diagnostic tests until the patient's condition can be more accurately ascertained. From this need arose the concept of a holding unit, also known as a holding area, observation ward, or overnight ward. A generalized computer simulation model of the queuing process in such a unit has been developed to evaluate the effects of changes in demand and utilization policies upon the congestion level in the unit. Bed use percentages, census level and daily service level are the criteria used to measure congestion. The model is also used to determine when additional staff are required and to investigate the extent to which economies of scale exist. The holding unit at Springfield (Mass.) Hospital Medical Center is used to demonstrate how the model is used.

274. DEVOLFE, R. and ARCADIO, F. Le service médical d'accueil à l'hôpital Édouard-Herriot de Lyon. **[Medical admission services at the Édouard-Herriot Hospital, Lyon.]** *Techniques Hospitalières*, Paris, 1975, Oct., vol. 31, no. 361, pp. 78-81.

During 1974, 57,000 patients were seen at the medical admission department of Édouard-Herriot Hospital, Lyon, which provides emergency and casualty services. Accident cases accounted for 70 per cent of these. Only 37 per cent of all patients seen needed to be admitted as in-patients. The staff of the department includes one full-time consultant, 21 other doctors, and 57 medical students. There are six cubicles where patients can be examined, four X-ray rooms, four waiting-rooms, four dressing-rooms, two plaster rooms, one room for psychiatric patients, and one vaccination room. Careful, detailed examination of each patient means that the number of cases requiring admission as in-patients can be kept to a minimum.

DAY HOSPITALS

See Abstract No. 285

CHILDREN

See also Abstract Nos. 219, 231, 234, 262, 296

275. LOUIS, M. and LOVEJOY, F. H. **Adolescent attitudes in a general pediatric hospital.** *American Journal of Diseases of Children*, Chicago, 1975, Sept., vol. 129, no. 9, pp. 1046-1049.

A study of 87 adolescent patients in the Children's Hospital Medical Center, Boston, Mass., was made to define their emotional, social, recreational and educational needs. Open-ended questionnaires were given to the adolescents, their parents and hospital staff. Chronic illness, prolonged length of stay, multiple admissions and severe illness were prominent in the population surveyed. These characteristics were associated with critical patient attitudes toward the physical facilities and psychological atmosphere of the hospital. Knowledge of these attitudes assists the recreational, vocational and

educational planning for adolescents; some of the steps taken at this hospital are outlined.

276. BISDEE, C. H. **Rehabilitation: the way it is at the Home for Crippled Children.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 83-86.

Rehabilitation services in the United States have mainly developed since the Second World War, and are designed to serve the vocational rehabilitation needs of adults disabled from any cause. However, the insurance carriers, including the Blue Cross, have been unwilling to fund medical rehabilitation services, and it is only recently that this difficulty has been overcome. The Home for Crippled Children, Pittsburgh, was set up in 1902 as a shelter and convalescent home. By 1957 it was one of the major post-polio convalescent centres, but with the reduction of demand for post-polio care it developed into a comprehensive rehabilitation centre for children and young adults disabled from any cause. The problems and schemes of treatment carried out in the Home are discussed; there needs to be a close relationship between the child, family, community and centre to meet the changing needs of the child as he grows older and this is greatly developed by the Home. The Home serves 120 children on a residential basis and an equal number on a full-day scheme. More than 300 children are cared for at follow-up clinics. More funds should be made available for handicapped children, and a national health plan implemented, if comprehensive rehabilitation treatment is to be given.

277. KOUROUKLIS, A. **Rehabilitation centres for handicapped children.** *Hospital Engineering*, Stevenage, 1975, Nov., vol. 29, no. 16, pp. 15-21, 23.

The design of centres for handicapped children presents many problems for the architect. This paper discusses the problems faced by the handicapped child and then uses the solutions as suggestions for designing new buildings for the children. To be able to assess the subject four factors are necessary: (i) the knowledge of what is a spastic; (ii) what special care is required; (iii) the importance of the correct diagnosis and classification of cases; and (iv) the importance of parallel research in the causes of the disease. Details are given of the centre for 650 children at Aghioi Anargyroi, near Athens. It consists of pairs of 30-bed units, using common administrative and medical spaces. Each room has six children of different ages so that the older may help the younger ones. Facilities include central treatment department and school, open-air theatre, swimming pool, workshops, central administrative and clinical block, church and staff quarters.

278. FRIEDBERG, D. Z. and CALDART, L. **A center for pediatric cardiovascular patients.** *American Journal of Nursing*, New York, 1975, Sept., vol. 75, no. 9, pp. 1480-1482.

The Pediatric Cardiovascular Center of Wisconsin, Milwaukee Children's Hospital, provides services for many of the 500 children born each year in Wisconsin with heart disease. It has also assumed responsibility for: (i) educating staff, parents and the public in matters relating to congenital heart disease; (ii) providing safe transport from outlying areas; (iii) improving communications with other hospitals; (iv) establishing a case register; and (v) developing community projects to prevent rheumatic fever and to screen for hypertension.

GERIATRICS AND LONG-STAY

See also Abstract Nos. 169-171, 173, 184, 190, 205, 206, 214, 221, 242, 248, 277, 297, 298

279. LIEBOWITZ, B. and BRODY, E. M. **The Philadelphia Geriatric Center: many options to meet many needs.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 101-106.

The Philadelphia Geriatric Center (PGC) has opened a new section called the Weiss Institute containing a 56-bed hospital and other facilities for long-stay patients. The PGC now offers skilled nursing and intermediate care facilities, high-rise flats with services, and small unit community housing for the elderly. On the same site there is a geriatric hospital with full out-patient services; the Gerontological Research Institute for biomedical, behavioural and social research; and facilities for training scientists and doctors. The wide diversity of services expresses the role of PGC, linking both practice and research. Originally the development began in 1952 as the 150-bed Home for the Jewish Aged, which was one of the first homes to admit handicapped elderly people. In 1955 a hospital was added; in 1965 the blocks of flats were completed giving 500 extra beds. The community housing project developed in the 1970s, and with the Weiss Institute there are now over 1,000 beds. The design of the Weiss Institute is described briefly. The centre has developed the policy of minimizing the differences between institutions and the community, and bringing long-stay services to the geriatric patient in as normal a life style as possible.

280. NATIONAAL ZIEKENHUISINSTITUUT. Onderzoek organisatie en personeelsbezetting van de verplegingsdienst in verpleeghuizen: rapportering over de 1e fase. **[Study of the organization and staffing of the nursing service in nursing homes: report on the 1st phase.]** Utrecht, Nationaal Ziekenhuisinstituut, 1975, 67pp. f6.50

The objective of this research is to develop a yardstick, which is as objective as possible, for determining the organizational structure and staffing needs of a nursing service, both quantitatively and qualitatively. The first phase involved listing and quantifying those factors which influence the staffing level of the nursing service. The main part of the study consisted of an analysis of the organization and staffing of the nursing service in four nursing homes. The main conclusions are: (i) differences in nursing staff levels are explained to a large extent by disagreement on policy with regard to organization, allocation of tasks between services and desired level of quality; (ii) the influence of the number of patients on staffing levels is less important than had been thought; (iii) there are great differences between the four nursing homes on the emphasis placed on the central role of the patient; and (iv) the management function is insufficiently developed at all levels. [This abstract has been prepared from an English summary of the report.]

281. LATHLEAN, J. and POOLE, J. **Management information to aid the care of the elderly: report of a research study for the Hastings Health District sponsored by the Nuffield Provincial Hospitals Trust in collaboration with the South East Thames Regional Health Authority.** Croydon, South East Thames Regional Health Authority, 1975, xx, 199pp. £2.50

This study aimed to identify the information needed to manage effectively the health

resources used by the elderly. The report identifies a very great deal of information that is already being collected by voluntary and statutory bodies and provides a baseline from which further steps can be taken to define measures of evaluating progress towards the objectives that have been set and to assess how far existing information can be used to this purpose. Following a chapter on the background aims and methodology of the study, the main research findings are presented in five sections: the elderly patient or client, material resources, the staff, the public and the organization. A number of conclusions are drawn and recommendations made and the sources of data are listed.

282. **Memorial Hospital Day House for inpatients.** *Nursing Mirror*, Sutton, Surrey, 1975, Nov. 20, vol. 141, no. 21, pp. 75-76.

The Austin Wheatley Day House standing in the grounds of the Memorial Hospital, Woolwich, London, is believed to be the first day house for in-patients. The house provides seating for 21 patients in a friendly atmosphere away from the hospital. There is a daily rota system for patients who visit from 0930 to 1600. The therapeutic value for geriatric in-patients is seen to be of great importance.

283. SHORE, H. **Long-term care regulations: counterproductive and costly.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 57, 59-60, 62.

Long-stay care is being increasingly criticized for its lack of direction, poor quality service, and the increase in paperwork associated with it. There is confusion between the United States government and the institutions as to its implementation. All patients differ in their needs, but those with mental disabilities are seen as the most neglected. New roles and ideas will have to be developed. Good nursing care must meet total needs. To solve the problem administrators must: (i) redefine long-stay care in its social context; (ii) develop relevant treatment schemes for individual patients; (iii) consider new schemes by using new tasks and staff; (iv) apply the knowledge of ageing processes to help prospective patients; and (v) find new methods of bringing people into care.

284. TRAGER, B. **Home care: providing the right to stay home.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 93-96, 98.

Home care in the United States promotes help appropriate to the needs of patients and their families. The services are provided by hospitals under a health care plan which, in recent years, has emphasized the importance of maintaining personal styles of life, protecting identities and preserving rights. Unfortunately there are very few home care schemes in the United States. Montefiore Hospital, New York City, first presented a co-ordinated approach to services for the sick at home in 1940; this scheme has been extended and a selection of services are offered to meet the specific needs of an individual at a given time, making therapeutic use of the environment, encouraging maximum use of the community and friends, and extending the range of treatment. Home care has a greater importance in meeting long-term needs than is realized, and if the service is to be of high quality then it will not be cheap. The major challenge is to produce a rationally implemented system to expand such schemes, since in the long run they will prove less expensive than the installation of additional hospital beds.

285. LAMDEN, R. S. and GREENSTEIN, L. N. **Partnership in outpatient day care.** *Hospitals*, Chicago, 1975, Oct. 16, vol. 49, no. 20, pp. 87-89.

Four hospitals and two nursing homes in Tucson, Ariz., have successfully combined to provide the country's largest system of geriatric, out-patient day care services. The scheme now has six centres, which are described together with the work carried out by the patients. All patients are referred to the centres by their doctors and a regular assessment of their progress is carried out. The average length of stay is 23 weeks, for two days a week. There are more than 400 patients in the scheme, and so far there has been an 80 per cent positive discharge rate.

CARDIOLOGY

See Abstract Nos. 230, 278

SURGERY

See also Abstract Nos. 172, 228

286. KERNAGHAN, S. G. **Peripheral issues cloud basic questions in day surgery.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 58-61.

The real issues in the debate on the relative merits of free-standing and hospital-affiliated day surgery are the long-term effect of the former on the cost of health care to the community and the change these facilities may foster in surgical care use and practice. It has been argued that the environment of free-standing facilities is more pleasant but if a hospital sets up a separate unit for day surgery there is no reason why it should not compete as regards physical and psychological environment. Hospital-based care is said to be better in relation to continuity and comprehensiveness of care but there is no general agreement on this. There is considerable saving in cost per procedure between in-patient and short-stay surgery and it has been demonstrated that costs in free-standing units are even lower. There are however other cost aspects and the overall impact of providing free-standing day surgery in a community health service must be considered. The transfer of services from an in-patient to an out-patient basis can reduce total community costs if accompanied by commensurate adjustments in capital structure and operating behaviour. The United States Social Security Administration is undertaking research into the cost effectiveness of several alternatives to hospital-based care, including free-standing surgical facilities.

287. HAWTHORNE, D. D. **Day surgery—its working well for patients.** *Texas Hospitals*, Austin, 1975, Nov., vol. 31, no. 6, pp. 16-19.

The Presbyterian Hospital, Dallas, begun a day surgery scheme in 1970 to cope with the problem of too few in-patient beds, a three- to four-week waiting list for treatment and a 90 per cent bed occupancy rate. Patients expecting day surgery report to the hospital the day before their appointment and complete various pre-admission formalities. On the day of surgery all patients have to report by 0630 to allow the anaesthetist time to see them before surgery. Operative procedures are performed

before 12 noon to allow patients time to recover from surgery. Those who have not recovered are transferred to a conventional nursing unit for an over-night stay. Over 7,500 patients have used the unit and of the total admissions 96 per cent were discharged to their home on the same day. The design of the unit is given. The costs to the patient and hospital are greatly decreased; all charges are processed centrally so that when the patient is discharged he is presented with a complete bill.

288. HAWTHORNE, D. D. **Hospital-based unit improves utilization.** *Hospitals*, Chicago, 1975, Oct. 1, vol. 49, no. 19, pp. 62-65.

The planning, construction and administration of a day surgery unit at the 500-bed Presbyterian Hospital of Dallas are described. In the past four years more than 7,500 patients have received care in the unit which started with seven beds but now has 20. Patients go to the hospital the day before the operation to complete pre-admission procedures. They then report at 0630 next morning and all surgery is performed before noon to give patients time to recover before discharge. The average time taken for the day surgery process is about seven hours. Patients who have not recovered sufficiently by 1800 go to the wards for an overnight stay. Besides giving more efficient use of surgical beds and a high level of patient satisfaction the day surgery programme lowers costs by about $100 per case compared with conventional surgery. The main reduction in cost is the room charge. Figures in the text illustrate the evaluation of patient costs in a day surgery unit and list procedures performed. A plan of the unit is given.

289. LIEBERMAN, S. L., GIACOIA, E. B. and FEDAK, M. **Hospital-based outpatient surgery: anesthesia experiences.** *New York State Journal of Medicine*, Lake Success, 1975, Feb., vol. 75, no. 3, pp. 437-444.

There are many compelling reasons for promoting the use of anaesthesia and surgery for minor procedures as an out-patient service. These include: (i) overnight hospital stays are unnecessary in the case of minor procedures of short duration; (ii) ambulatory services minimize bed use; (iii) control of costs must be considered; and (iv) the patient will avoid many of the symptoms of over-anaesthetization. The stand-by facilities needed for out-patient surgery should include: (i) available bed space; (ii) blood transfusion facilities; (iii) major surgical care facilities; and (iv) major resuscitation facilities for cardiopulmonary care. The scheme at De Graff Memorial Hospital, North Tonawanda, N.Y., has been well received, it is a great economy and convenience to both the patient and the family, the surgeon and the hospital, and brings with it increased efficiency and greater availability of health care.

MATERNITY

290. TIMBERLAKE, B. **The New Life Center.** *American Journal of Nursing*, New York, 1975, Sept., vol. 75, no. 9, pp. 1456-1461.

The 220-bed Family Hospital, Milwaukee, Wis., has modernized its maternity department, which is now called the New Life Center. The Center was established in response to three needs expressed by expectant parents: (i) to have their babies as a family in an atmosphere of warmth and relaxation, much like their own homes,

(ii) to have control over their bodies and some choice and participation in what is done to or for them; and (iii) to remain in close touch with their families throughout the birth and hospital stay. This paper describes the unit, the preparation and other educational classes, the care of patients during and after birth, and facilities for the families of patients.

291. LANE, D. S. and KELMAN, H. R. **Assessment of maternal health care quality: conceptual and methodologic issues.** *Medical Care*, Philadelphia, 1975, Oct., vol. 13, no. 10, pp. 791-807.

Past attempts to assess the quality of maternity care are analysed in order to develop an evaluation framework that will have utility and applicability beyond a specific programme, population or health discipline. Available approaches have focused attention on either 'high risk' populations or upon women experiencing a complicated pregnancy or delivery. Quality has been defined as the extent to which normative or empirically derived standards of obstetrical care have been applied. An alternative approach is suggested which sees the pregnancy as a normal physiological event but with the potentiality of either causing or exacerbating social or health problems. The quality of maternity care is viewed as the application of those necessary health and health-related services that are required to safeguard the health of the mother and child, minimize the noxious consequences of pre-existing or concurrent health hazards or conditions, and upgrade the health and functioning of those women who require it. Additionally, the system of services should be functionally organized to optimize care. Indicators of quality are suggested which incorporate structural, process, and outcome variables, and which link medical and consumer criteria in a comprehensive community level approach to quality assessment.

GYNAECOLOGY

292. ROBINSON, D. W. and others. **Histories obtained by two-stage questionnaire with automated transcript in specialist gynaecological practice.** *British Medical Journal*, London, 1975, Nov. 29, vol. iv, pp. 510-513.

A two-stage questionnaire has been developed for use by gynaecological patients in the department of obstetrics and gynaecology, University of Leeds. The patient completes the questionnaire at home under less pressure of time and embarrassment as frequently happens in the hospital. The questionnaire is divided into two sections, the first stage (root) identifies the problem and obtains general background information. The second stage (branch) deals in depth with the presenting problem. A list of 24 categories of presenting problems to cover all aspects of gynaecology was established. The questions were framed in lay language for presentation to the patient. A system was devised to produce a typescript on a semi-automated basis. By linking an electric typewriter to a programmable desk top calculator it is possible to generate answers by a simple touch of a key. A non-medical assistant transcribes the data which is then handed to the doctor before he examines the patient. The transcript compares favourably with the conventional hand-written history, in content, ease of assimilation and cost. There is no storage of confidential information and no risk of disclosure. The present two-stage system has been in operation in Leeds for the past three years and is well received.

PSYCHIATRY

See also Abstract Nos. 173, 207, 208

293. FRANKLIN, J. L., KITTREDGE, L. D. and THRASHER, J. H. **A survey of factors related to mental hospital readmissions.** *Hospital & Community Psychiatry*, Washington, 1975, Nov., vol. 26, no. 11, pp. 749-751.

This study of 107 patients selected at random from those discharged from a state psychiatric hospital in a period of one year attempted to differentiate those who were readmitted to the hospital from those who were not on the basis of 52 factors, both personal and environmental, and also compared those who misused alcohol with those who did not. Thirty-six of the patients returned and 71 did not. One of the findings was that in both the total and in the non-alcoholic subsample, those readmitted more often received income from sources other than their own employment or the employment of someone in their household. They also tended to be single, separated or divorced. In both the alcoholic and non-alcoholic subsamples, those readmitted reported more contacts with the community mental health centre after their discharge than those not readmitted. In the total sample, the readmitted patients engaged in fewer leisure-time activities and were more likely to report a drinking problem.

294. ROBERTS, J. O. **Ambulance aid for psychiatric patients.** *Ambulance Service Journal*, Gloucester, 1975, vol. 3, no. 2, pp. 13-14.

This paper provides a brief guide to the management of psychiatric patients for those involved with their transport. The two categories of admission, voluntary and involuntary, are discussed and the clinical types of patient evaluated. Although each type has to be treated in a different way it is essential to remember that the patient is the most important person and his needs must be attended to at all times.

295. BARKER, P. **Handicapped by preconceptions—the need for basic independence training for the profoundly retarded.** *Nursing Mirror*, Sutton, Surrey, 1975, Nov. 20, vol. 141, no. 21, pp. 66-68.

This paper assesses the need for independence training for the profoundly mentally handicapped. Their care is generally based upon complete custodial care, with attention given to physical needs, rather than to the development of the potential of the individual. Various theories are put forward and the methods used to encourage patients to develop are analysed. Patients were selected for an 'operant conditioning project' from a male ward of profoundly handicapped patients, in which 31 of the 50 residents were epileptic and 60 per cent were unable to walk. The emphasis in the ward was towards nursing care with a medical bias. The project aimed at examining the possibility of producing alternative treatment to increase independence rather than catering for the patients' needs. A group of patients was selected for treatment; their complete living accommodation was reorganized and the emphasis was upon teaching new or adapting current behaviour. The patient was guaranteed six hours of programmed instruction time each day, and gradually was left alone for longer periods, so that as a result of his own efforts he assimilated new skills. The results showed a greater independence, less need for intensive care and more freedom for the staff.

296. **A community-oriented center for severely and profoundly retarded children.** *Hospital & Community Psychiatry*, Washington, 1975, Oct., vol. 26, no. 10, pp. 667-671.

The Elizabeth Ludeman Center, Park Forest, Ill., was opened in 1972 to provide residential care for severely and profoundly mentally handicapped children from the Chicago area. The centre caters for 355 children, between the ages of six and 18, and has developed a large number of schemes to develop greater interaction between residents and the direct-care staff members and with the community. Children live in groups of eight or less in 50 four-bedroom houses situated in landscaped streets in a 60-acre complex. Each group of 10 houses has a central house which serves as a school and offices. Additional buildings serve as swimming and physical training centres, a 10-bed health centre, auditorium and service buildings. There is a high ratio of direct-care staff members to residents. An audiovisual service gives information regarding the centre and in-service staff training. Students are trained for jobs as part-time technicians in several community-oriented jobs. The community programme involves close work between residents, groups and agencies, thus integrating the centre with the community and preventing duplication of effort. In three years the centre has discharged 30 residents to foster homes, and enrolled 30 in workshops outside the centre. Three photographs but no plans are included.

297. LANGLEY, G. E. and others. **The Exe Vale Joint Psycho-geriatric Assessment Unit [Hallett Clinic].** *Age and Ageing*, London, 1975, Aug., vol. 4, no. 3, pp. 125-128.

The Hallett Clinic, Exe Vale Hospital, Exminster, was established on 9 November 1967 to take patients from a catchment area with a population of 300,000 who were: (i) over the age of 65; (ii) suffering from mental illness, the origin of which was in doubt; and (iii) unable to be treated in the community. This paper reviews the 409 admissions in the first 2½ years of operation. The average admission rate was 164 per annum and the average length of stay 57 days. Over-all, only 30 per cent of all admissions needed longer-stay hospital care.

298. BUTTREY, P. J. and MCDONALD, C. **Psychogeriatric patients: a study of their flow in a mental hospital.** *Modern Geriatrics*, London, 1975, Oct., vol. 5, no. 10, pp. 30, 32-33.

A study was carried out at Warlingham Park Hospital, Surrey, to examine the movements inside a psychiatric hospital of four categories of elderly patients and the circumstances of their discharge to after-care facilities. The four categories examined were: (i) patients with severe dementia; (ii) patients with mild dementia; (iii) patients who entered hospitals for the mentally ill before modern methods of treatment were available and who had grown old in them after many years there; and (iv) a cohort of 100 consecutive admissions from 1 January 1971 onwards. The study concluded that patients with severe dementia should be nursed in specialized accommodation of the type currently available in a psychiatric hospital. Many patients with mild dementia could be cared for in part III accommodation or homes for the elderly mentally infirm, but strong supporting services from the local psychiatric hospital would be needed. Careful assessment of the long-stay patients was needed to identify those with the

potential to survive in local authority accommodation, perhaps after a period of preparation and training. The admission cohort showed a delay in placement in part III accommodation or homes for the elderly mentally infirm after referral to the Social Services Department. Such delays argued that consultation and forward planning were needed between psychiatric hospitals and local authorities.

299. MADRE, J. Le foyer de post-cure de Creil. **[After-care home at Creil.]** *Techniques Hospitalières*, Paris, 1975, Nov., vol. 31, no. 362, pp. 50-53.

This after-care home for the mentally ill was opened in 1974 under the management and with the support of the psychiatric hospital of Clermont de l'Oise. It can take 25 in-patients and 15 out-patients from a very wide catchment area. Its aim is the social and occupational rehabilitation of psychiatric patients, mostly schizophrenics, aged from 18 to 50 years, for whom hospital treatment is no longer justifiable. The spacious and comfortable home includes a sitting-room, recreation room, kitchen, dining-room, laundry, pharmacy, offices, two five-bed and 15 single rooms. Its nursing and general staff, which is insufficient for the home's needs, consists of 21 persons, in addition to a part-time social worker and three doctors. Since the home opened 82 patients have been admitted and 42 discharged; of the latter, two-thirds were successful discharges and one third were re-admitted to hospital (partly because the six-month stay in the home is too short). After a patient's admission a search for employment begins; patients who find employment pay 35 per cent of their earnings to the home. Patients can borrow money from the home for their essential needs and repay it after obtaining employment. After one year, it is clear that this home is suitable for psychotics, but not for alcoholics. More flexibility is desirable regarding re-admission after a short stay in hospital and arrangements are necessary for temporary accommodation for some of the discharged patients. More home visits should be made and out-patients, who are not former patients, should be able to attend the home for meals.

300. BEWLEY, T. and others. **Census of mental hospital patients and life expectancy of those unlikely to be discharged.** *British Medical Journal*, London, 1975, Dec. 20, vol. iv, pp. 671-675.

A census was carried out in Tooting Bec Hospital in 1973 to estimate the numbers of patients requiring permanent care for the next 20 to 40 years. A questionnaire establishing demographic, social, rehabilitation and nursing problems, together with a diagnosis of the patient's condition was completed, with a follow-up at 10 and 20 months later. The results revealed that of 1,467 resident patients 20 per cent had been admitted in the previous five months and 15 per cent in the year before that. Of the 65 per cent who had been in hospital for over 17 months, one per cent (16) had been in hospital for over 50 years. From information from the follow-up procedures after 20 months 822 patients (56 per cent) still remained as in-patients. The most realistic prediction was that 210 (14 per cent) of these patients would be in the hospital in 20 years time and 43 (three per cent) in 40 years. In the circumstances a need to upgrade the present condition of psychiatric hospitals to provide continuing care appears to be essential, accepting the fact that chronic handicaps, and chronic psychiatric illness will continue to exist.

301. FOTTRELL, E., PEERMOHAMED, R. and KOTHARI, R. **Identification and definition of long-stay mental hospital population.** *British Medical Journal*, London, 1975, Dec. 20, vol. iv, pp. 675-677.

The decision to run down and close many large psychiatric hospitals and treat patients in the psychiatric wards of general hospitals highlights the problem of the core of long-stay psychiatric patients resistant to discharge. From April 1974 to March 1975, 1292 patients were treated at Tooting Bec Hospital; of these 442 were long-stay patients, who had been in hospital from eight to 23 years and represented 40 per cent of the total. They were mainly unvisited, unoccupied or single and most suffered from schizophrenia or organic psychosis. Many were in a good state of health. This central core is the main obstacle to running down psychiatric hospitals. There is a need for local authorities to provide more accommodation and after-care facilities and methods must be found to prevent the accumulation of long-stay patients.

SOCIAL MEDICINE

302. MORRIS, C. **Hospitals and smoking.** *Texas Hospitals*, Austin, 1975, Sept., vol. 31, no. 4, pp. 24-25.

Hospitals in Texas are actively promoting an anti-smoking campaign, providing areas for non-smokers, and promoting good health. Legislation has been passed making it an offence to smoke in certain public areas. Smoking cessation clinics and close co-operation between health agencies are by-products of the anti-smoking campaign. The hospital is now seen not only as a centre for the treatment of illness, but as a prevention centre promoting health.

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